

SWN PRODUCTION COMPANY, LLC

Location: Brooke County, WV
 Field: Brooke
 Facility: Violet Coss BRK Pad

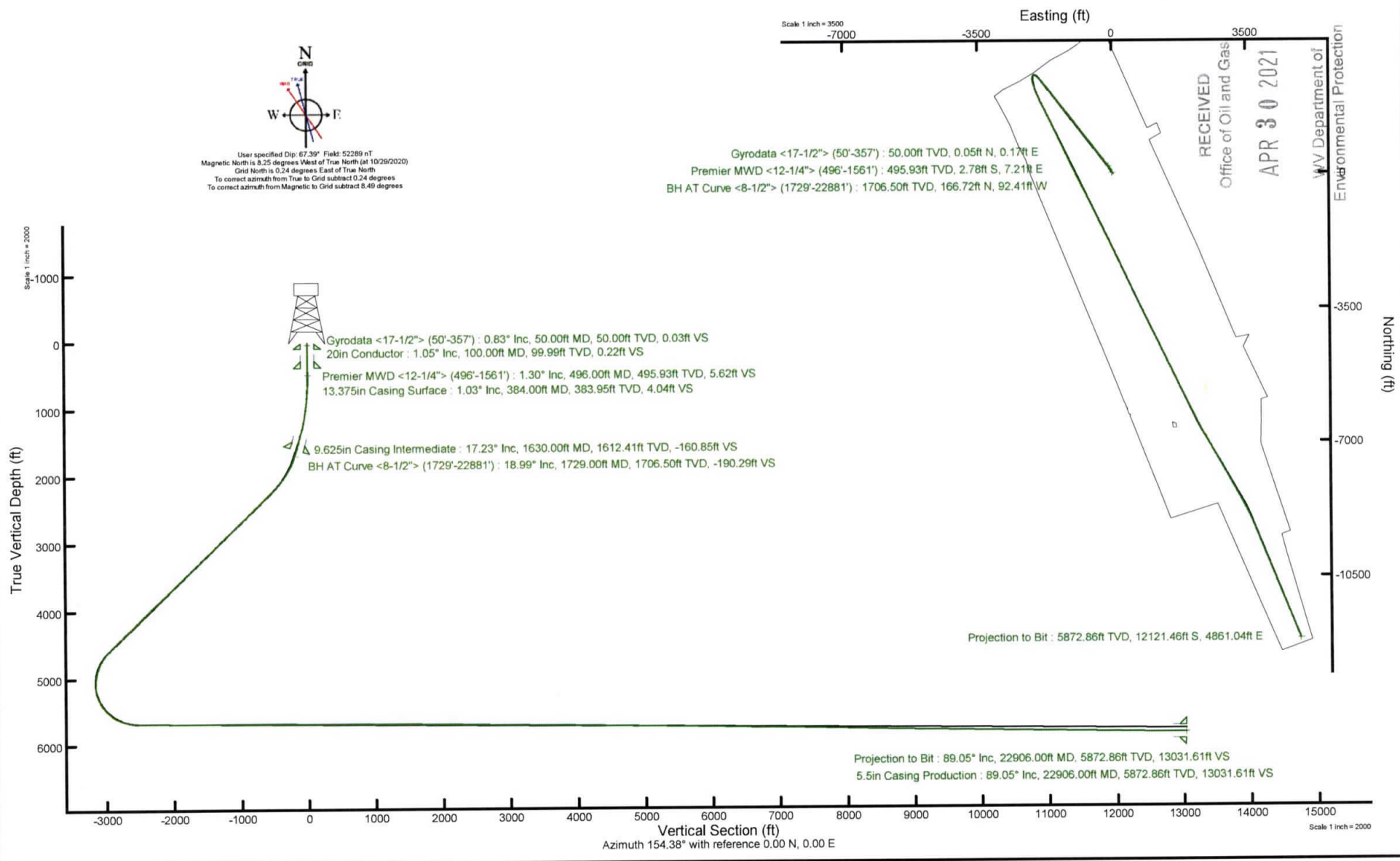
Slot: Slot 6H
 Well: Violet Coss BRK 6H
 Wellbore: Violet Coss BRK 6H PWB



Plot reference wellpath is Violet Coss BRK 6H PWP Rev-C.0	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC 40 (KB)	North Reference: Grid north
Reference wellpath measured depths are referenced to SDC 40 (KB)	Scale: True distance
SDC 40 (KB) to Mean Sea Level: 1198.8 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot 6H): -1172.8 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: aterjen on 2020-12-08; Database: WA_MPL_EASTERNUS_Defn

Location Information						
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Violet Coss BRK Pad		1745871.450	14618637.315	40°15'6.3470"N	80°37'19.3910"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot 6H	18.40	-7.55	1745863.900	14618655.710	40°15'6.5292"N	80°37'19.4874"W
SDC 40 (KB) to Ground level (At Slot: Slot 6H)				26ft		
Mean Sea Level to Ground level (At Slot: Slot 6H)				-1172.8ft		
SDC 40 (KB) to Mean Sea Level				1198.8ft		

API: 47-009-00240-0000
 BH Job #: 110647643
 Rig: SDC 40
 Duration: 12/01/2020 - 12/07/2020





Actual Wellpath Report

Violet Coss BRK 6H AWP Proj: 22906'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Violet Coss BRK 6H
Field	Brooke	API	47009002400000
Facility	Violet Coss BRK Pad	Wellbore	Violet Coss BRK 6H AWB
Slot	Slot 6H		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Atenjen
Scale	0.999613	Report Generated	12/8/2020 at 6:03:17 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	18.40	-7.55	1745863.90	14618655.71	40°15'6.5292"N	80°37'19.4874"W
Facility Reference Pt			1745871.45	14618637.32	40°15'6.3470"N	80°37'19.3910"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM

Calculation method	Minimum curvature	SDC 40 (KB) to Facility Vertical Datum	1198.80ft
Horizontal Reference Pt	Slot	SDC 40 (KB) to Mean Sea Level	1198.80ft
Vertical Reference Pt	SDC 40 (KB)	SDC 40 (KB) to Ground Level at Slot (Slot 6H)	26.00ft
MD Reference Pt	SDC 40 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	154.38°



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Slot	Slot 6H		

WELLPATH DATA (269 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	73.890	0.00	0.00	0.00	0.00	1745863.90	14618655.71	40°15'6.5292"N	80°37'19.4874"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	73.890	26.00	0.00	0.00	0.00	1745863.90	14618655.71	40°15'6.5292"N	80°37'19.4874"W	0.00	0.000	0.00	0.00	0.00
50.00	0.830	73.890	50.00	0.03	0.05	0.17	1745864.07	14618655.76	40°15'6.5296"N	80°37'19.4852"W	0.17	73.890	3.46	3.46	0.00
75.00	0.970	76.740	75.00	0.10	0.15	0.55	1745864.45	14618655.86	40°15'6.5306"N	80°37'19.4803"W	0.57	74.954	0.59	0.56	11.40
100.00	1.050	83.660	99.99	0.22	0.22	0.98	1745864.88	14618655.93	40°15'6.5313"N	80°37'19.4747"W	1.01	77.307	0.58	0.32	27.68
125.00	1.120	84.620	124.99	0.39	0.27	1.45	1745865.35	14618655.98	40°15'6.5318"N	80°37'19.4687"W	1.48	79.499	0.29	0.28	3.84
150.00	0.790	98.450	149.98	0.57	0.27	1.87	1745865.76	14618655.98	40°15'6.5317"N	80°37'19.4633"W	1.88	81.865	1.60	-1.32	55.32
175.00	0.960	122.840	174.98	0.84	0.13	2.21	1745866.11	14618655.84	40°15'6.5303"N	80°37'19.4589"W	2.22	86.694	1.62	0.68	97.56
200.00	0.810	121.860	199.98	1.17	-0.08	2.54	1745866.44	14618655.63	40°15'6.5283"N	80°37'19.4547"W	2.54	91.786	0.60	-0.60	-3.92
225.00	0.960	130.560	224.98	1.51	-0.31	2.85	1745866.75	14618655.40	40°15'6.5260"N	80°37'19.4507"W	2.86	96.186	0.80	0.60	34.80
250.00	0.930	120.520	249.97	1.87	-0.55	3.18	1745867.08	14618655.16	40°15'6.5236"N	80°37'19.4464"W	3.23	99.771	0.67	-0.12	-40.16
275.00	1.050	128.740	274.97	2.24	-0.79	3.53	1745867.43	14618654.92	40°15'6.5212"N	80°37'19.4419"W	3.62	102.664	0.74	0.48	32.88
300.00	0.990	122.700	299.96	2.63	-1.05	3.89	1745867.79	14618654.66	40°15'6.5186"N	80°37'19.4372"W	4.03	105.146	0.49	-0.24	-24.16
325.00	1.190	128.680	324.96	3.05	-1.33	4.28	1745868.18	14618654.38	40°15'6.5158"N	80°37'19.4323"W	4.48	107.304	0.92	0.80	23.92
350.00	1.010	134.240	349.96	3.49	-1.65	4.64	1745868.54	14618654.06	40°15'6.5127"N	80°37'19.4276"W	4.92	109.567	0.84	-0.72	22.24
357.00	1.010	131.650	356.95	3.61	-1.73	4.73	1745868.63	14618653.98	40°15'6.5118"N	80°37'19.4265"W	5.04	110.124	0.65	0.00	-37.00
496.00	1.300	98.360	495.93	5.62	-2.78	7.21	1745871.10	14618652.93	40°15'6.5014"N	80°37'19.3946"W	7.72	111.074	0.52	0.21	-23.95
587.00	1.480	50.340	586.90	5.91	-2.18	9.13	1745873.03	14618653.53	40°15'6.5073"N	80°37'19.3697"W	9.39	103.407	1.26	0.20	-52.77
679.00	2.710	4.980	678.85	3.75	0.75	10.23	1745874.13	14618656.46	40°15'6.5361"N	80°37'19.3554"W	10.26	85.816	2.15	1.34	-49.30
771.00	4.720	354.780	770.65	-1.67	6.69	10.08	1745873.98	14618662.39	40°15'6.5948"N	80°37'19.3570"W	12.10	56.444	2.29	2.18	-11.09
862.00	6.290	352.330	861.23	-9.92	15.36	9.07	1745872.97	14618671.06	40°15'6.6805"N	80°37'19.3695"W	17.84	30.579	1.74	1.73	-2.69
953.00	7.090	344.820	951.61	-20.19	25.72	6.94	1745870.83	14618681.42	40°15'6.7830"N	80°37'19.3965"W	26.64	15.097	1.30	0.88	-8.25
1043.00	7.830	332.420	1040.85	-31.78	36.51	2.64	1745866.54	14618692.21	40°15'6.8898"N	80°37'19.4513"W	36.61	4.142	1.96	0.82	-13.78
1134.00	9.320	326.250	1130.83	-45.27	48.13	-4.32	1745859.58	14618703.82	40°15'7.0050"N	80°37'19.5405"W	48.33	354.871	1.92	1.64	-6.78
1225.00	11.580	329.210	1220.32	-61.66	62.11	-13.09	1745850.81	14618717.79	40°15'7.1435"N	80°37'19.6528"W	63.47	348.098	2.55	2.48	3.25
1315.00	13.600	329.610	1308.15	-81.21	79.00	-23.07	1745840.84	14618734.68	40°15'7.3108"N	80°37'19.7806"W	82.30	343.721	2.25	2.24	0.44
1407.00	14.170	326.930	1397.46	-103.15	97.76	-34.69	1745829.23	14618753.44	40°15'7.4967"N	80°37'19.9294"W	103.73	340.466	0.93	0.62	-2.91
1500.00	14.850	321.510	1487.50	-126.06	116.63	-48.31	1745815.60	14618772.30	40°15'7.6837"N	80°37'20.1041"W	126.24	337.498	1.63	0.73	-5.83
1561.00	16.020	319.700	1546.30	-141.82	129.17	-58.62	1745805.30	14618784.83	40°15'7.8081"N	80°37'20.2364"W	141.85	335.589	2.07	1.92	-2.97
1729.00	18.990	316.600	1706.50	-190.29	166.72	-92.41	1745771.53	14618822.37	40°15'8.1806"N	80°37'20.6700"W	190.62	331.002	1.85	1.77	-1.85



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Field	Brooke	API	4700900240000
Facility	Violet Coss BRK Pad	Wellbore	Violet Coss BRK 6H AWB
Slot	Slot 6H		

WELLPATH DATA (269 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]
1820.00	22.000	325.630	1791.76	-221.25	191.56	-112.21	1745751.73	14618847.19	40°15'8.4268"N	80°37'20.9241"W	222.00	329.639	4.79	3.31	9.92
1910.00	27.570	324.120	1873.43	-258.43	222.37	-133.95	1745730.00	14618878.00	40°15'8.7322"N	80°37'21.2028"W	259.60	328.936	6.23	6.19	-1.68
2001.00	31.990	322.450	1952.40	-302.76	258.56	-161.00	1745702.96	14618914.17	40°15'9.0910"N	80°37'21.5496"W	304.59	328.091	4.94	4.86	-1.84
2093.00	35.990	322.710	2028.66	-353.10	299.41	-192.24	1745671.73	14618955.00	40°15'9.4959"N	80°37'21.9503"W	355.81	327.297	4.35	4.35	0.28
2183.00	38.420	322.410	2100.34	-406.36	342.61	-225.33	1745638.66	14618998.19	40°15'9.9243"N	80°37'22.3746"W	410.07	326.668	2.71	2.70	-0.33
2274.00	42.110	322.540	2169.77	-463.90	389.25	-261.14	1745602.86	14619044.81	40°15'10.3866"N	80°37'22.8340"W	468.73	326.143	4.06	4.05	0.14
2365.00	46.530	322.400	2234.86	-526.09	439.66	-299.87	1745564.15	14619095.19	40°15'10.8864"N	80°37'23.3307"W	532.18	325.704	4.86	4.86	-0.15
2456.00	46.580	322.110	2297.43	-590.69	491.90	-340.31	1745523.72	14619147.42	40°15'11.4043"N	80°37'23.8494"W	598.14	325.323	0.24	0.05	-0.32
2547.00	46.350	322.290	2360.12	-655.17	544.03	-380.74	1745483.30	14619199.52	40°15'11.9211"N	80°37'24.3681"W	664.03	325.013	0.29	-0.25	0.20
2638.00	46.380	322.280	2422.91	-719.57	596.13	-421.03	1745443.03	14619251.60	40°15'12.4377"N	80°37'24.8848"W	729.82	324.767	0.03	0.03	-0.01
2728.00	46.560	322.530	2484.90	-783.40	647.83	-460.84	1745403.24	14619303.29	40°15'12.9502"N	80°37'25.3954"W	795.02	324.573	0.28	0.20	0.28
2819.00	46.410	322.220	2547.55	-847.95	700.10	-501.13	1745362.97	14619355.53	40°15'13.4684"N	80°37'25.9122"W	860.97	324.405	0.30	-0.16	-0.34
2910.00	46.420	322.480	2610.29	-912.42	752.29	-541.39	1745322.72	14619407.70	40°15'13.9858"N	80°37'26.4286"W	926.84	324.259	0.21	0.01	0.29
3001.00	46.340	322.410	2673.07	-976.87	804.51	-581.55	1745282.58	14619459.91	40°15'14.5036"N	80°37'26.9436"W	992.69	324.138	0.10	-0.09	-0.08
3092.00	46.380	322.280	2735.87	-1041.28	856.65	-621.78	1745242.36	14619512.03	40°15'15.0205"N	80°37'27.4597"W	1058.52	324.027	0.11	0.04	-0.14
3183.00	46.430	322.240	2798.62	-1105.72	908.77	-662.12	1745202.04	14619564.12	40°15'15.5372"N	80°37'27.9771"W	1124.39	323.923	0.06	0.05	-0.04
3273.00	46.210	322.260	2860.78	-1169.35	960.23	-701.97	1745162.21	14619615.57	40°15'16.0475"N	80°37'28.4882"W	1189.45	323.832	0.24	-0.24	0.02
3364.00	46.420	322.280	2923.63	-1233.70	1012.28	-742.24	1745121.95	14619667.59	40°15'16.5635"N	80°37'29.0048"W	1255.24	323.750	0.23	0.23	0.02
3454.00	46.430	322.320	2985.67	-1297.45	1063.87	-782.11	1745082.10	14619719.16	40°15'17.0749"N	80°37'29.5162"W	1320.42	323.678	0.03	0.01	0.04
3545.00	46.100	322.340	3048.58	-1361.76	1115.91	-822.29	1745041.93	14619771.19	40°15'17.5909"N	80°37'30.0316"W	1386.15	323.614	0.36	-0.36	0.02
3636.00	46.260	322.230	3111.59	-1425.96	1167.85	-862.46	1745001.78	14619823.11	40°15'18.1058"N	80°37'30.5468"W	1451.80	323.554	0.20	0.18	-0.12
3727.00	46.090	322.170	3174.60	-1490.13	1219.73	-902.69	1744961.56	14619874.96	40°15'18.6201"N	80°37'31.0630"W	1517.43	323.496	0.19	-0.19	-0.07
3817.00	47.140	322.170	3236.42	-1554.06	1271.39	-942.81	1744921.46	14619926.60	40°15'19.1323"N	80°37'31.5776"W	1582.82	323.441	1.17	1.17	0.00
3908.00	47.020	322.200	3298.39	-1619.20	1324.03	-983.67	1744880.62	14619979.23	40°15'19.6543"N	80°37'32.1017"W	1649.45	323.390	0.13	-0.13	0.03
3999.00	47.120	322.250	3360.37	-1684.33	1376.70	-1024.48	1744839.82	14620031.87	40°15'20.1764"N	80°37'32.6252"W	1716.06	323.345	0.12	0.11	0.05
4089.00	47.100	322.140	3421.62	-1748.79	1428.80	-1064.90	1744799.41	14620083.95	40°15'20.6929"N	80°37'33.1437"W	1781.99	323.302	0.09	-0.02	-0.12
4180.00	46.880	322.220	3483.70	-1813.82	1481.36	-1105.70	1744758.63	14620136.50	40°15'21.2140"N	80°37'33.6671"W	1848.52	323.262	0.25	-0.24	0.09
4271.00	47.020	322.280	3545.82	-1878.84	1533.94	-1146.42	1744717.93	14620189.06	40°15'21.7353"N	80°37'34.1893"W	1915.01	323.227	0.16	0.15	0.07
4361.00	46.930	322.300	3607.23	-1943.17	1585.99	-1186.66	1744677.70	14620241.09	40°15'22.2514"N	80°37'34.7056"W	1980.79	323.196	0.10	-0.10	0.02
4453.00	46.860	322.310	3670.09	-2008.86	1639.14	-1227.73	1744636.65	14620294.22	40°15'22.7783"N	80°37'35.2324"W	2047.95	323.167	0.08	-0.08	0.01



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4544.00	46.990	322.270	3732.24	-2073.86	1691.73	-1268.39	1744596.00	14620346.78	40°15'23.2996"N	80°37'35.7540"W	2114.42	323.139	0.15	0.14	-0.04
4634.00	46.710	322.250	3793.79	-2138.05	1743.66	-1308.58	1744555.83	14620398.69	40°15'23.8144"N	80°37'36.2695"W	2180.07	323.112	0.31	-0.31	-0.02
4725.00	47.120	322.240	3855.95	-2203.03	1796.20	-1349.27	1744515.15	14620451.21	40°15'24.3353"N	80°37'36.7915"W	2246.53	323.087	0.45	0.45	-0.01
4818.00	47.220	322.110	3919.18	-2269.69	1850.08	-1391.10	1744473.34	14620505.07	40°15'24.8694"N	80°37'37.3281"W	2314.72	323.060	0.15	0.11	-0.14
4908.00	47.120	322.200	3980.36	-2334.20	1902.20	-1431.59	1744432.86	14620557.17	40°15'25.3862"N	80°37'37.8475"W	2380.72	323.035	0.13	-0.11	0.10
4999.00	47.320	322.380	4042.17	-2399.51	1955.04	-1472.45	1744392.03	14620609.99	40°15'25.9100"N	80°37'38.3716"W	2447.50	323.015	0.26	0.22	0.20
5090.00	45.310	322.250	4105.02	-2463.86	2007.11	-1512.67	1744351.82	14620662.00	40°15'26.4263"N	80°37'38.8876"W	2513.30	322.996	2.21	-2.21	-0.14
5180.00	46.160	322.310	4167.84	-2526.88	2058.09	-1552.10	1744312.40	14620713.00	40°15'26.9317"N	80°37'39.3934"W	2577.75	322.978	0.95	0.94	0.07
5271.00	46.470	322.280	4230.69	-2591.22	2110.16	-1592.35	1744272.17	14620765.05	40°15'27.4479"N	80°37'39.9097"W	2643.55	322.961	0.34	0.34	-0.03
5363.00	46.190	321.110	4294.22	-2656.14	2162.38	-1633.60	1744230.94	14620817.25	40°15'27.9656"N	80°37'40.4389"W	2710.08	322.930	0.97	-0.30	-1.27
5453.00	46.320	321.240	4356.45	-2719.44	2213.03	-1674.36	1744190.19	14620867.88	40°15'28.4679"N	80°37'40.9619"W	2775.06	322.889	0.18	0.14	0.14
5545.00	45.780	321.110	4420.30	-2783.93	2264.63	-1715.88	1744148.68	14620919.46	40°15'28.9795"N	80°37'41.4947"W	2841.27	322.849	0.60	-0.59	-0.14
5637.00	46.370	321.320	4484.12	-2848.45	2316.28	-1757.39	1744107.19	14620971.09	40°15'29.4916"N	80°37'42.0273"W	2907.51	322.812	0.66	0.64	0.23
5727.00	45.550	321.240	4546.68	-2911.46	2366.76	-1797.86	1744066.74	14621021.55	40°15'29.9921"N	80°37'42.5465"W	2972.18	322.779	0.91	-0.91	-0.09
5819.00	45.940	321.030	4610.88	-2975.60	2418.07	-1839.21	1744025.41	14621072.84	40°15'30.5008"N	80°37'43.0771"W	3038.05	322.743	0.45	0.42	-0.23
5910.00	36.890	315.970	4679.08	-3033.47	2463.23	-1878.85	1743985.78	14621117.98	40°15'30.9488"N	80°37'43.5859"W	3098.00	322.665	10.60	-9.95	-5.56
6001.00	30.720	305.430	4754.72	-3079.80	2496.40	-1916.84	1743947.81	14621151.14	40°15'31.2781"N	80°37'44.0742"W	3147.43	322.481	9.33	-6.78	-11.58
6092.00	23.370	307.450	4835.72	-3116.29	2520.89	-1950.15	1743914.51	14621175.62	40°15'31.5215"N	80°37'44.5025"W	3187.16	322.275	8.14	-8.08	2.22
6183.00	16.950	290.180	4921.17	-3141.94	2536.47	-1976.98	1743887.69	14621191.19	40°15'31.6765"N	80°37'44.8478"W	3215.92	322.066	9.55	-7.05	-18.98
6274.00	14.520	274.030	5008.80	-3157.10	2541.85	-2000.83	1743863.85	14621196.57	40°15'31.7307"N	80°37'45.1551"W	3234.86	321.792	5.48	-2.67	-17.75
6364.00	15.460	247.910	5095.83	-3163.43	2538.13	-2023.22	1743841.46	14621192.85	40°15'31.6948"N	80°37'45.4441"W	3245.85	321.440	7.52	1.04	-29.02
6455.00	19.000	214.670	5182.94	-3156.81	2521.34	-2042.94	1743821.75	14621176.07	40°15'31.5297"N	80°37'45.6994"W	3245.11	320.983	11.32	3.89	-36.53
6546.00	23.660	188.140	5267.88	-3134.23	2490.99	-2053.99	1743810.71	14621145.73	40°15'31.2303"N	80°37'45.8434"W	3228.61	320.492	11.65	5.12	-29.15
6639.00	30.060	180.910	5350.83	-3097.83	2449.18	-2057.00	1743807.70	14621103.93	40°15'30.8172"N	80°37'45.8846"W	3198.39	319.974	7.71	6.88	-7.77
6729.00	37.530	170.720	5425.63	-3051.25	2399.47	-2052.93	1743811.77	14621054.25	40°15'30.3259"N	80°37'45.8347"W	3157.85	319.451	10.39	8.30	-11.32
6820.00	45.710	162.710	5493.65	-2992.28	2340.88	-2038.75	1743825.95	14620995.68	40°15'29.7463"N	80°37'45.6550"W	3104.22	318.946	10.71	8.99	-8.80
6866.00	49.570	159.180	5524.64	-2958.53	2308.78	-2027.62	1743837.06	14620963.59	40°15'29.4286"N	80°37'45.5132"W	3072.74	318.710	10.13	8.39	-7.67
6913.00	52.550	158.870	5554.18	-2922.10	2274.65	-2014.54	1743850.15	14620929.47	40°15'29.0908"N	80°37'45.3463"W	3038.48	318.470	6.36	6.34	-0.66
6959.00	57.920	158.130	5580.40	-2884.42	2239.50	-2000.69	1743863.99	14620894.34	40°15'28.7430"N	80°37'45.1695"W	3003.02	318.224	11.75	11.67	-1.61
7004.00	62.530	158.370	5602.74	-2845.46	2203.23	-1986.22	1743878.45	14620858.09	40°15'28.3840"N	80°37'44.9849"W	2966.36	317.965	10.25	10.24	0.53



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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Violet Coss BRK 6H
Field	Brooke	API	4700900240000
Facility	Violet Coss BRK Pad	Wellbore	Violet Coss BRK 6H AWB
Slot	Slot 6H		

WELLPATH DATA (269 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]
7051.00	67.950	158.660	5622.41	-2802.91	2163.53	-1970.60	1743894.07	14620818.40	40°15'27.9910"N	80°37'44.7855"W	2926.45	317.672	11.55	11.53	0.62
7096.00	72.030	159.360	5637.81	-2760.77	2124.06	-1955.46	1743909.21	14620778.95	40°15'27.6004"N	80°37'44.5923"W	2887.12	317.367	9.18	9.07	1.56
7141.00	77.030	159.660	5649.81	-2717.59	2083.45	-1940.28	1743924.38	14620738.35	40°15'27.1984"N	80°37'44.3988"W	2847.01	317.038	11.13	11.11	0.67
7187.00	80.260	159.500	5658.86	-2672.68	2041.19	-1924.55	1743940.10	14620696.11	40°15'26.7801"N	80°37'44.1982"W	2805.41	316.685	7.03	7.02	-0.35
7232.00	83.150	157.640	5665.36	-2628.28	1999.75	-1908.28	1743956.37	14620654.68	40°15'26.3699"N	80°37'43.9905"W	2764.15	316.341	7.61	6.42	-4.13
7278.00	84.730	156.430	5670.21	-2582.58	1957.63	-1890.43	1743974.21	14620612.58	40°15'25.9530"N	80°37'43.7626"W	2721.41	316.001	4.32	3.43	-2.63
7369.00	89.290	154.590	5674.96	-2491.75	1874.96	-1852.77	1744011.85	14620529.94	40°15'25.1345"N	80°37'43.2813"W	2635.95	315.341	5.40	5.01	-2.02
7456.00	89.690	153.110	5675.73	-2404.76	1796.87	-1814.43	1744050.18	14620451.88	40°15'24.3612"N	80°37'42.7910"W	2553.60	314.721	1.76	0.46	-1.70
7546.00	89.660	152.260	5676.24	-2314.81	1716.91	-1773.13	1744091.46	14620371.95	40°15'23.5694"N	80°37'42.2627"W	2468.15	314.077	0.95	-0.03	-0.94
7639.00	89.540	152.150	5676.89	-2221.87	1634.64	-1729.76	1744134.81	14620289.71	40°15'22.7546"N	80°37'41.7078"W	2379.94	313.380	0.18	-0.13	-0.12
7731.00	88.430	153.480	5678.52	-2129.93	1552.82	-1687.74	1744176.82	14620207.92	40°15'21.9443"N	80°37'41.1702"W	2293.41	312.616	1.88	-1.21	1.45
7821.00	89.200	154.800	5680.38	-2039.95	1471.85	-1648.49	1744216.05	14620126.99	40°15'21.1426"N	80°37'40.6684"W	2209.95	311.760	1.70	0.86	1.47
7914.00	88.740	154.500	5682.06	-1946.97	1387.82	-1608.68	1744255.84	14620042.99	40°15'20.3106"N	80°37'40.1595"W	2124.59	310.785	0.59	-0.49	-0.32
8005.00	89.140	154.830	5683.74	-1855.98	1305.59	-1569.75	1744294.76	14619960.79	40°15'19.4963"N	80°37'39.6618"W	2041.73	309.751	0.57	0.44	0.36
8096.00	90.090	155.360	5684.35	-1764.99	1223.05	-1531.43	1744333.07	14619878.28	40°15'18.6791"N	80°37'39.1720"W	1959.88	308.612	1.20	1.04	0.58
8186.00	89.940	156.780	5684.33	-1675.04	1140.79	-1494.92	1744369.56	14619796.06	40°15'17.8647"N	80°37'38.7057"W	1880.48	307.348	1.59	-0.17	1.58
8277.00	89.720	154.860	5684.60	-1584.07	1057.78	-1457.65	1744406.81	14619713.08	40°15'17.0429"N	80°37'38.2294"W	1801.01	305.967	2.12	-0.24	-2.11
8368.00	90.650	156.340	5684.30	-1493.09	974.91	-1420.06	1744444.39	14619630.24	40°15'16.2224"N	80°37'37.7491"W	1722.51	304.471	1.92	1.02	1.63
8458.00	89.140	154.210	5684.47	-1403.11	893.17	-1382.42	1744482.02	14619548.53	40°15'15.4131"N	80°37'37.2681"W	1645.85	302.866	2.90	-1.68	-2.37
8549.00	90.000	154.940	5685.15	-1312.12	810.98	-1343.35	1744521.07	14619466.38	40°15'14.5994"N	80°37'36.7687"W	1569.17	301.119	1.24	0.95	0.80
8639.00	90.220	155.190	5684.98	-1222.12	729.37	-1305.41	1744559.00	14619384.80	40°15'13.7913"N	80°37'36.2837"W	1495.35	299.193	0.37	0.24	0.28
8730.00	90.710	154.810	5684.24	-1131.13	646.90	-1266.95	1744597.44	14619302.36	40°15'12.9748"N	80°37'35.7922"W	1422.55	297.049	0.68	0.54	-0.42
8821.00	89.970	154.350	5683.70	-1040.14	564.72	-1227.89	1744636.48	14619220.21	40°15'12.1610"N	80°37'35.2929"W	1351.53	294.698	0.96	-0.81	-0.51
8911.00	90.090	153.800	5683.65	-950.14	483.77	-1188.55	1744675.82	14619139.29	40°15'11.3595"N	80°37'34.7898"W	1283.23	292.148	0.63	0.13	-0.61
9002.00	89.940	154.580	5683.63	-859.14	401.85	-1148.93	1744715.42	14619057.40	40°15'10.5483"N	80°37'34.2833"W	1217.18	289.278	0.87	-0.16	0.86
9093.00	89.820	154.970	5683.82	-768.14	319.53	-1110.14	1744754.19	14618975.11	40°15'9.7332"N	80°37'33.7876"W	1155.21	286.057	0.45	-0.13	0.43
9183.00	89.780	155.180	5684.13	-678.15	237.91	-1072.22	1744792.10	14618893.53	40°15'8.9251"N	80°37'33.3028"W	1098.29	282.511	0.24	-0.04	0.23
9274.00	89.690	153.370	5684.55	-587.15	155.94	-1032.72	1744831.58	14618811.58	40°15'8.1134"N	80°37'32.7979"W	1044.43	278.587	1.99	-0.10	-1.99
9364.00	89.780	154.210	5684.97	-497.16	75.19	-992.97	1744871.32	14618730.87	40°15'7.3138"N	80°37'32.2897"W	995.81	274.330	0.94	0.10	0.93
9455.00	89.260	152.790	5685.73	-406.18	-6.24	-952.37	1744911.90	14618649.47	40°15'6.5074"N	80°37'31.7705"W	952.39	269.624	1.66	-0.57	-1.56



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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Violet Coss BRK 6H
Field	Brooke	API	47009002400000
Facility	Violet Coss BRK Pad	Wellbore	Violet Coss BRK 6H AWB
Slot	Slot 6H		

WELLPATH DATA (269 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]
9546.00	90.090	155.050	5686.25	-315.19	-87.97	-912.37	1744951.89	14618567.77	40°15'5.6981"N	80°37'31.2590"W	916.60	264.493	2.65	0.91	2.48
9636.00	89.660	153.390	5686.45	-225.19	-169.01	-873.23	1744991.01	14618486.77	40°15'4.8957"N	80°37'30.7586"W	889.43	259.046	1.91	-0.48	-1.84
9727.00	89.690	153.320	5686.96	-134.21	-250.34	-832.42	1745031.81	14618405.46	40°15'4.0902"N	80°37'30.2367"W	869.25	253.262	0.08	0.03	-0.08
9818.00	89.780	152.670	5687.38	-43.24	-331.42	-791.10	1745073.11	14618324.42	40°15'3.2873"N	80°37'29.7083"W	857.71	247.269	0.72	0.10	-0.71
9908.00	89.750	152.760	5687.75	46.73	-411.41	-749.84	1745114.35	14618244.46	40°15'2.4952"N	80°37'29.1806"W	855.29	241.248	0.11	-0.03	0.10
9999.00	89.600	153.400	5688.27	137.70	-492.54	-708.64	1745155.53	14618163.36	40°15'1.6917"N	80°37'28.6536"W	863.00	235.199	0.72	-0.16	0.70
10090.00	89.170	153.090	5689.25	228.68	-573.80	-667.68	1745196.48	14618082.14	40°15'0.8871"N	80°37'28.1298"W	880.36	229.325	0.58	-0.47	-0.34
10181.00	89.290	152.930	5690.47	319.64	-654.88	-626.38	1745237.76	14618001.09	40°15'0.0841"N	80°37'27.6016"W	906.21	223.726	0.22	0.13	-0.18
10272.00	90.000	153.310	5691.03	410.62	-736.04	-585.24	1745278.89	14617919.95	40°14'59.2803"N	80°37'27.0755"W	940.35	218.489	0.88	0.78	0.42
10362.00	90.030	155.280	5691.01	500.61	-817.13	-546.21	1745317.91	14617838.90	40°14'58.4774"N	80°37'26.5765"W	982.88	213.760	2.19	0.03	2.19
10450.00	89.170	153.010	5691.62	588.60	-896.32	-507.83	1745356.26	14617759.74	40°14'57.6933"N	80°37'26.0860"W	1030.18	209.535	2.76	-0.98	-2.58
10542.00	90.150	155.190	5692.17	680.60	-979.07	-467.65	1745396.43	14617677.02	40°14'56.8739"N	80°37'25.5723"W	1085.02	205.531	2.60	1.07	2.37
10634.00	89.970	154.360	5692.07	772.59	-1062.29	-428.44	1745435.62	14617593.83	40°14'56.0498"N	80°37'25.0712"W	1145.44	201.965	0.92	-0.20	-0.90
10724.00	89.420	154.890	5692.55	862.59	-1143.61	-389.88	1745474.18	14617512.55	40°14'55.2446"N	80°37'24.5783"W	1208.24	198.825	0.85	-0.61	0.59
10815.00	89.260	154.370	5693.60	953.58	-1225.83	-350.89	1745513.15	14617430.36	40°14'54.4305"N	80°37'24.0800"W	1275.06	195.974	0.60	-0.18	-0.57
10905.00	89.480	154.340	5694.59	1043.58	-1306.96	-311.94	1745552.08	14617349.26	40°14'53.6272"N	80°37'23.5821"W	1343.67	193.424	0.25	0.24	-0.03
10996.00	89.420	154.060	5695.46	1134.57	-1388.88	-272.34	1745591.67	14617267.37	40°14'52.8160"N	80°37'23.0758"W	1415.33	191.094	0.31	-0.07	-0.31
11086.00	89.350	153.880	5696.43	1224.56	-1469.75	-232.84	1745631.15	14617186.53	40°14'52.0152"N	80°37'22.5710"W	1488.08	189.002	0.21	-0.08	-0.20
11177.00	89.290	154.110	5697.51	1315.56	-1551.53	-192.95	1745671.03	14617104.78	40°14'51.2054"N	80°37'22.0609"W	1563.48	187.089	0.26	-0.07	0.25
11268.00	89.970	153.980	5698.10	1406.55	-1633.35	-153.12	1745710.84	14617023.00	40°14'50.3952"N	80°37'21.5518"W	1640.51	185.356	0.76	0.75	-0.14
11358.00	89.480	154.040	5698.53	1496.55	-1714.25	-113.68	1745750.26	14616942.13	40°14'49.5941"N	80°37'21.0476"W	1718.01	183.794	0.55	-0.54	0.07
11450.00	89.540	154.080	5699.32	1588.54	-1796.97	-73.44	1745790.49	14616859.44	40°14'48.7749"N	80°37'20.5332"W	1798.47	182.340	0.08	0.07	0.04
11542.00	89.510	153.990	5700.08	1680.54	-1879.69	-33.16	1745830.75	14616776.76	40°14'47.9559"N	80°37'20.0183"W	1879.98	181.011	0.10	-0.03	-0.10
11633.00	89.480	153.510	5700.88	1771.53	-1961.30	7.09	1745870.98	14616695.18	40°14'47.1477"N	80°37'19.5038"W	1961.31	179.793	0.53	-0.03	-0.53
11724.00	89.540	154.220	5701.66	1862.52	-2042.99	47.17	1745911.05	14616613.52	40°14'46.3388"N	80°37'18.9914"W	2043.53	178.677	0.78	0.07	0.78
11816.00	89.260	153.810	5702.62	1954.51	-2125.68	87.48	1745951.34	14616530.85	40°14'45.5199"N	80°37'18.4761"W	2127.48	177.644	0.54	-0.30	-0.45
11906.00	89.290	153.800	5703.76	2044.50	-2206.43	127.20	1745991.05	14616450.13	40°14'44.7202"N	80°37'17.9683"W	2210.10	176.701	0.04	0.03	-0.01
11997.00	89.050	153.510	5705.08	2135.49	-2287.97	167.58	1746031.41	14616368.63	40°14'43.9128"N	80°37'17.4521"W	2294.10	175.811	0.41	-0.26	-0.32
12089.00	89.510	154.430	5706.23	2227.48	-2370.63	207.95	1746071.77	14616286.00	40°14'43.0942"N	80°37'16.9360"W	2379.74	174.987	1.12	0.50	1.00
12179.00	88.740	154.170	5707.61	2317.46	-2451.72	246.97	1746110.78	14616204.94	40°14'42.2913"N	80°37'16.4372"W	2464.13	174.248	0.90	-0.86	-0.29



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Operator	SWN PRODUCTION COMPANY, LLC	Well	Violet Coss BRK 6H
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Facility	Violet Coss BRK Pad	Wellbore	Violet Coss BRK 6H AWB
Slot	Slot 6H		

WELLPATH DATA (269 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]
12270.00	89.230	154.150	5709.22	2408.45	-2533.61	286.63	1746150.42	14616123.09	40°14'41.4804"N	80°37'15.9303"W	2549.77	173.545	0.54	0.54	-0.02
12361.00	89.290	153.860	5710.40	2499.44	-2615.40	326.51	1746190.28	14616041.33	40°14'40.6705"N	80°37'15.4205"W	2635.70	172.884	0.33	0.07	-0.32
12454.00	88.890	153.710	5711.87	2592.42	-2698.82	367.59	1746231.35	14615957.94	40°14'39.8444"N	80°37'14.8954"W	2723.74	172.244	0.46	-0.43	-0.16
12546.00	89.230	154.160	5713.38	2684.41	-2781.45	408.01	1746271.75	14615875.34	40°14'39.0262"N	80°37'14.3788"W	2811.22	171.655	0.61	0.37	0.49
12639.00	89.480	154.230	5714.43	2777.40	-2865.17	448.49	1746312.21	14615791.65	40°14'38.1972"N	80°37'13.8614"W	2900.06	171.104	0.28	0.27	0.08
12732.00	89.260	154.100	5715.45	2870.39	-2948.87	489.01	1746352.72	14615707.99	40°14'37.3683"N	80°37'13.3434"W	2989.14	170.584	0.27	-0.24	-0.14
12823.00	89.880	154.390	5716.14	2961.39	-3030.83	528.55	1746392.25	14615626.06	40°14'36.5568"N	80°37'12.8380"W	3076.57	170.108	0.75	0.68	0.32
12915.00	89.480	154.080	5716.65	3053.39	-3113.68	568.54	1746432.22	14615543.24	40°14'35.7364"N	80°37'12.3269"W	3165.16	169.652	0.55	-0.43	-0.34
13007.00	89.020	153.820	5717.85	3145.38	-3196.33	608.94	1746472.60	14615460.63	40°14'34.9179"N	80°37'11.8105"W	3253.82	169.214	0.57	-0.50	-0.28
13097.00	89.050	154.040	5719.37	3235.36	-3277.16	648.49	1746512.14	14615379.83	40°14'34.1175"N	80°37'11.3050"W	3340.71	168.807	0.25	0.03	0.24
13189.00	89.420	154.100	5720.60	3327.35	-3359.89	688.71	1746552.35	14615297.13	40°14'33.2983"N	80°37'10.7909"W	3429.75	168.416	0.41	0.40	0.07
13282.00	89.350	153.730	5721.60	3420.34	-3443.41	729.60	1746593.22	14615213.64	40°14'32.4712"N	80°37'10.2682"W	3519.86	168.037	0.40	-0.08	-0.40
13373.00	89.910	153.960	5722.18	3511.34	-3525.09	769.72	1746633.32	14615131.99	40°14'31.6623"N	80°37'9.7555"W	3608.15	167.683	0.67	0.62	0.25
13463.00	89.290	153.990	5722.81	3601.33	-3605.97	809.20	1746672.79	14615051.15	40°14'30.8615"N	80°37'9.2508"W	3695.65	167.352	0.69	-0.69	0.03
13554.00	89.200	153.730	5724.01	3692.32	-3687.65	849.29	1746712.86	14614969.50	40°14'30.0526"N	80°37'8.7383"W	3784.19	167.031	0.30	-0.10	-0.29
13645.00	90.090	154.210	5724.57	3783.32	-3769.42	889.22	1746752.78	14614887.76	40°14'29.2429"N	80°37'8.2279"W	3872.88	166.726	1.11	0.98	0.53
13737.00	88.990	153.720	5725.31	3875.31	-3852.08	929.60	1746793.14	14614805.13	40°14'28.4244"N	80°37'7.7118"W	3962.66	166.432	1.31	-1.20	-0.53
13828.00	89.230	153.950	5726.73	3966.29	-3933.74	969.73	1746833.25	14614723.50	40°14'27.6157"N	80°37'7.1990"W	4051.51	166.152	0.37	0.26	0.25
13919.00	89.080	153.780	5728.07	4057.28	-4015.43	1009.81	1746873.31	14614641.84	40°14'26.8067"N	80°37'6.6867"W	4140.46	165.884	0.25	-0.16	-0.19
14010.00	89.140	153.980	5729.48	4148.27	-4097.13	1049.86	1746913.35	14614560.18	40°14'25.9977"N	80°37'6.1747"W	4229.50	165.628	0.23	0.07	0.22
14101.00	89.140	154.260	5730.85	4239.25	-4178.99	1089.58	1746953.06	14614478.35	40°14'25.1871"N	80°37'5.6671"W	4318.70	165.387	0.31	0.00	0.31
14191.00	88.980	153.730	5732.32	4329.24	-4259.87	1129.03	1746992.49	14614397.50	40°14'24.3862"N	80°37'5.1628"W	4406.95	165.156	0.62	-0.18	-0.59
14283.00	89.140	153.760	5733.83	4421.22	-4342.37	1169.73	1747033.17	14614315.04	40°14'23.5692"N	80°37'4.6427"W	4497.15	164.924	0.18	0.17	0.03
14374.00	89.380	153.680	5735.01	4512.21	-4423.95	1210.01	1747073.44	14614233.48	40°14'22.7613"N	80°37'4.1277"W	4586.45	164.703	0.28	0.26	-0.09
14465.00	88.920	154.220	5736.36	4603.19	-4505.70	1249.97	1747113.39	14614151.77	40°14'21.9518"N	80°37'3.6170"W	4675.87	164.495	0.78	-0.51	0.59
14558.00	89.050	153.860	5738.01	4696.18	-4589.30	1290.68	1747154.07	14614068.20	40°14'21.1239"N	80°37'3.0968"W	4767.34	164.292	0.41	0.14	-0.39
14650.00	89.780	154.140	5738.95	4788.17	-4671.99	1331.00	1747194.39	14613985.54	40°14'20.3051"N	80°37'2.5814"W	4857.88	164.098	0.85	0.79	0.30
14741.00	88.950	153.910	5739.95	4879.16	-4753.79	1370.86	1747234.22	14613903.77	40°14'19.4950"N	80°37'2.0720"W	4947.50	163.914	0.95	-0.91	-0.25
14833.00	89.200	153.630	5741.44	4971.14	-4836.30	1411.51	1747274.86	14613821.29	40°14'18.6779"N	80°37'1.5524"W	5038.07	163.730	0.41	0.27	-0.30
14925.00	89.170	154.250	5742.75	5063.13	-4918.94	1451.93	1747315.26	14613738.68	40°14'17.8596"N	80°37'1.0359"W	5128.75	163.555	0.67	-0.03	0.67



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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Violet Coss BRK 6H
Field	Brooke	API	47009002400000
Facility	Violet Coss BRK Pad	Wellbore	Violet Coss BRK 6H AWB
Slot	Slot 6H		

WELLPATH DATA (269 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]
15015.00	89.110	153.870	5744.10	5153.12	-4999.86	1491.29	1747354.61	14613657.79	40°14'17.0582"N	80°37'0.5328"W	5217.53	163.392	0.43	-0.07	-0.42
15107.00	88.860	154.270	5745.73	5245.10	-5082.59	1531.51	1747394.82	14613575.10	40°14'16.2390"N	80°37'0.0188"W	5308.32	163.231	0.51	-0.27	0.43
15200.00	89.230	153.610	5747.28	5338.09	-5166.12	1572.36	1747435.65	14613491.60	40°14'15.4118"N	80°36'59.4967"W	5400.11	163.072	0.81	0.40	-0.71
15292.00	88.980	153.970	5748.72	5430.07	-5248.65	1612.99	1747476.26	14613409.10	40°14'14.5945"N	80°36'58.9774"W	5490.91	162.917	0.48	-0.27	0.39
15383.00	89.480	153.690	5749.94	5521.06	-5330.32	1653.12	1747516.38	14613327.47	40°14'13.7858"N	80°36'58.4645"W	5580.78	162.769	0.63	0.55	-0.31
15473.00	89.320	154.520	5750.88	5611.05	-5411.28	1692.42	1747555.67	14613246.54	40°14'12.9841"N	80°36'57.9623"W	5669.76	162.632	0.94	-0.18	0.92
15564.00	88.950	153.940	5752.25	5702.04	-5493.21	1731.98	1747595.21	14613164.63	40°14'12.1727"N	80°36'57.4568"W	5759.79	162.500	0.76	-0.41	-0.64
15655.00	89.080	153.540	5753.82	5793.02	-5574.81	1772.24	1747635.45	14613083.07	40°14'11.3647"N	80°36'56.9423"W	5849.73	162.364	0.46	0.14	-0.44
15747.00	89.140	153.830	5755.25	5885.00	-5657.27	1813.02	1747676.21	14613000.65	40°14'10.5481"N	80°36'56.4211"W	5940.68	162.231	0.32	0.07	0.32
15838.00	88.800	153.860	5756.88	5975.99	-5738.94	1853.12	1747716.30	14612919.01	40°14'9.7394"N	80°36'55.9085"W	6030.71	162.105	0.38	-0.37	0.03
15929.00	89.170	153.900	5758.50	6066.97	-5820.63	1893.18	1747756.34	14612837.35	40°14'8.9304"N	80°36'55.3966"W	6120.77	161.983	0.41	0.41	0.04
16020.00	89.050	154.070	5759.91	6157.95	-5902.40	1933.09	1747796.24	14612755.61	40°14'8.1206"N	80°36'54.8866"W	6210.89	161.866	0.23	-0.13	0.19
16112.00	88.950	153.990	5761.52	6249.94	-5985.10	1973.37	1747836.50	14612672.94	40°14'7.3017"N	80°36'54.3718"W	6302.03	161.752	0.14	-0.11	-0.09
16203.00	89.200	154.010	5762.98	6340.92	-6066.88	2013.26	1747876.37	14612591.20	40°14'6.4919"N	80°36'53.8621"W	6392.20	161.642	0.28	0.27	0.02
16294.00	88.950	154.170	5764.45	6431.91	-6148.72	2053.01	1747916.12	14612509.39	40°14'5.6814"N	80°36'53.3540"W	6482.41	161.536	0.33	-0.27	0.18
16386.00	88.980	154.060	5766.11	6523.90	-6231.47	2093.17	1747956.26	14612426.66	40°14'4.8619"N	80°36'52.8409"W	6573.63	161.433	0.12	0.03	-0.12
16477.00	89.260	154.050	5767.51	6614.88	-6313.29	2132.98	1747996.05	14612344.87	40°14'4.0517"N	80°36'52.3322"W	6663.88	161.332	0.31	0.31	-0.01
16569.00	88.830	153.280	5769.05	6706.86	-6395.73	2173.79	1748036.84	14612262.47	40°14'3.2353"N	80°36'51.8107"W	6755.05	161.228	0.96	-0.47	-0.84
16660.00	89.290	153.640	5770.54	6797.84	-6477.13	2214.44	1748077.48	14612181.10	40°14'2.4291"N	80°36'51.2910"W	6845.22	161.125	0.64	0.51	0.40
16750.00	89.140	152.280	5771.77	6887.80	-6557.29	2255.35	1748118.38	14612100.98	40°14'1.6353"N	80°36'50.7681"W	6934.31	161.020	1.52	-0.17	-1.51
16842.00	89.320	151.320	5773.01	6979.70	-6638.36	2298.82	1748161.83	14612019.94	40°14'0.8323"N	80°36'50.2121"W	7025.12	160.899	1.06	0.20	-1.04
16934.00	88.770	150.580	5774.54	7071.52	-6718.77	2343.49	1748206.48	14611939.55	40°14'0.0358"N	80°36'49.6407"W	7115.74	160.771	1.00	-0.60	-0.80
17025.00	88.650	149.630	5776.59	7162.24	-6797.64	2388.83	1748251.80	14611860.71	40°13'59.2544"N	80°36'49.0605"W	7205.17	160.637	1.05	-0.13	-1.04
17116.00	89.200	151.050	5778.30	7253.00	-6876.70	2433.86	1748296.81	14611781.68	40°13'58.4712"N	80°36'48.4845"W	7294.70	160.510	1.67	0.60	1.56
17207.00	88.990	151.530	5779.74	7343.85	-6956.50	2477.56	1748340.50	14611701.91	40°13'57.6808"N	80°36'47.9254"W	7384.53	160.397	0.58	-0.23	0.53
17297.00	88.980	150.880	5781.33	7433.70	-7035.36	2520.91	1748383.83	14611623.09	40°13'56.8996"N	80°36'47.3710"W	7473.37	160.286	0.72	-0.01	-0.72
17388.00	88.800	150.470	5783.09	7524.49	-7114.69	2565.47	1748428.37	14611543.79	40°13'56.1138"N	80°36'46.8009"W	7563.09	160.171	0.49	-0.20	-0.45
17479.00	88.680	151.160	5785.09	7615.29	-7194.11	2609.83	1748472.72	14611464.40	40°13'55.3270"N	80°36'46.2334"W	7652.88	160.061	0.77	-0.13	0.76
17570.00	88.490	150.550	5787.34	7706.09	-7273.57	2654.14	1748517.00	14611384.97	40°13'54.5400"N	80°36'45.6666"W	7742.69	159.953	0.70	-0.21	-0.67
17661.00	88.710	150.600	5789.56	7796.87	-7352.81	2698.83	1748561.68	14611305.77	40°13'53.7550"N	80°36'45.0949"W	7832.46	159.844	0.25	0.24	0.05



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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Violet Coss BRK 6H
Field	Brooke	API	4700900240000
Facility	Violet Coss BRK Pad	Wellbore	Violet Coss BRK 6H AWB
Slot	Slot 6H		

WELLPATH DATA (269 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]
17753.00	88.980	150.920	5791.42	7888.66	-7433.07	2743.76	1748606.59	14611225.54	40°13'52.9600"N	80°36'44.5201"W	7923.30	159.739	0.46	0.29	0.35
17843.00	88.770	150.550	5793.19	7978.46	-7511.56	2787.75	1748650.56	14611147.07	40°13'52.1824"N	80°36'43.9574"W	8012.19	159.639	0.47	-0.23	-0.41
17934.00	88.710	150.570	5795.19	8069.24	-7590.79	2832.46	1748695.26	14611067.87	40°13'51.3975"N	80°36'43.3853"W	8102.04	159.537	0.07	-0.07	0.02
18026.00	88.860	150.580	5797.14	8161.02	-7670.91	2877.65	1748740.43	14610987.79	40°13'50.6039"N	80°36'42.8072"W	8192.91	159.437	0.16	0.16	0.01
18116.00	88.650	150.570	5799.09	8250.80	-7749.28	2921.86	1748784.62	14610909.45	40°13'49.8275"N	80°36'42.2417"W	8281.82	159.341	0.23	-0.23	-0.01
18208.00	88.610	150.560	5801.29	8342.57	-7829.38	2967.06	1748829.80	14610829.38	40°13'49.0340"N	80°36'41.6635"W	8372.73	159.245	0.04	-0.04	-0.01
18301.00	88.830	150.750	5803.37	8435.35	-7910.43	3012.62	1748875.35	14610748.36	40°13'48.2311"N	80°36'41.0806"W	8464.68	159.151	0.31	0.24	0.20
18392.00	88.680	150.780	5805.35	8526.14	-7989.82	3057.05	1748919.76	14610669.00	40°13'47.4447"N	80°36'40.5122"W	8554.69	159.062	0.17	-0.16	0.03
18483.00	88.830	150.460	5807.32	8616.93	-8069.09	3101.69	1748964.38	14610589.76	40°13'46.6594"N	80°36'39.9412"W	8644.70	158.974	0.39	0.16	-0.35
18573.00	88.920	150.970	5809.09	8706.72	-8147.58	3145.70	1749008.38	14610511.30	40°13'45.8819"N	80°36'39.3782"W	8733.75	158.889	0.58	0.10	0.57
18664.00	89.200	150.940	5810.58	8797.55	-8227.12	3189.88	1749052.54	14610431.79	40°13'45.0940"N	80°36'38.8132"W	8823.88	158.807	0.31	0.31	-0.03
18755.00	89.420	151.230	5811.68	8888.39	-8306.77	3233.87	1749096.52	14610352.17	40°13'44.3050"N	80°36'38.2504"W	8914.06	158.729	0.40	0.24	0.32
18847.00	88.680	150.730	5813.21	8980.22	-8387.21	3278.50	1749141.12	14610271.77	40°13'43.5082"N	80°36'37.6797"W	9005.21	158.650	0.97	-0.80	-0.54
18939.00	88.920	151.420	5815.13	9072.04	-8467.71	3322.99	1749185.59	14610191.29	40°13'42.7107"N	80°36'37.1107"W	9096.40	158.573	0.79	0.26	0.75
19030.00	89.660	151.100	5816.26	9162.90	-8547.50	3366.74	1749229.33	14610111.54	40°13'41.9204"N	80°36'36.5511"W	9186.66	158.501	0.89	0.81	-0.35
19121.00	89.660	152.300	5816.80	9253.80	-8627.62	3409.88	1749272.45	14610031.45	40°13'41.1268"N	80°36'35.9995"W	9277.02	158.435	1.32	0.00	1.32
19211.00	88.830	151.530	5817.99	9343.71	-8707.01	3452.24	1749314.80	14609952.09	40°13'40.3404"N	80°36'35.4578"W	9366.43	158.372	1.26	-0.92	-0.86
19302.00	89.480	152.950	5819.33	9434.63	-8787.53	3494.62	1749357.16	14609871.60	40°13'39.5429"N	80°36'34.9159"W	9456.90	158.313	1.72	0.71	1.56
19393.00	88.800	154.000	5820.69	9525.61	-8868.94	3535.26	1749397.78	14609790.22	40°13'38.7366"N	80°36'34.3967"W	9547.57	158.267	1.37	-0.75	1.15
19483.00	88.800	156.150	5822.58	9615.57	-8950.53	3573.18	1749435.68	14609708.66	40°13'37.9287"N	80°36'33.9125"W	9637.41	158.237	2.39	0.00	2.39
19574.00	89.260	157.060	5824.12	9706.49	-9034.04	3609.30	1749471.80	14609625.19	40°13'37.1019"N	80°36'33.4514"W	9728.36	158.222	1.12	0.51	1.00
19667.00	88.980	156.900	5825.55	9799.38	-9119.62	3645.67	1749508.15	14609539.64	40°13'36.2546"N	80°36'32.9875"W	9821.32	158.210	0.35	-0.30	-0.17
19757.00	88.950	158.180	5827.17	9889.23	-9202.78	3680.04	1749542.51	14609456.51	40°13'35.4314"N	80°36'32.5490"W	9911.30	158.204	1.42	-0.03	1.42
19848.00	89.020	157.800	5828.79	9980.04	-9287.14	3714.14	1749576.60	14609372.19	40°13'34.5963"N	80°36'32.1142"W	10002.29	158.202	0.42	0.08	-0.42
19939.00	89.200	158.130	5830.20	10070.85	-9371.48	3748.28	1749610.72	14609287.88	40°13'33.7614"N	80°36'31.6789"W	10093.27	158.200	0.41	0.20	0.36
20029.00	89.200	158.150	5831.46	10160.64	-9455.00	3781.79	1749644.21	14609204.39	40°13'32.9346"N	80°36'31.2517"W	10183.27	158.200	0.02	0.00	0.02
20120.00	89.380	157.900	5832.58	10251.45	-9539.38	3815.84	1749678.25	14609120.04	40°13'32.0992"N	80°36'30.8175"W	10274.26	158.198	0.34	0.20	-0.27
20212.00	88.980	157.790	5833.90	10343.28	-9624.58	3850.53	1749712.93	14609034.88	40°13'31.2558"N	80°36'30.3751"W	10366.25	158.195	0.45	-0.43	-0.12
20302.00	89.010	158.050	5835.48	10433.09	-9707.97	3884.35	1749746.74	14608951.52	40°13'30.4303"N	80°36'29.9438"W	10456.23	158.193	0.29	0.03	0.29
20393.00	88.950	158.150	5837.10	10523.88	-9792.38	3918.29	1749780.66	14608867.14	40°13'29.5946"N	80°36'29.5111"W	10547.22	158.192	0.13	-0.07	0.11

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Violet Coss BRK 6H
Field	Brooke	API	47009002400000
Facility	Violet Coss BRK Pad	Wellbore	Violet Coss BRK 6H AWB
Slot	Slot 6H		

WELLPATH DATA (269 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]
20484.00	89.110	157.650	5838.64	10614.70	-9876.69	3952.52	1749814.88	14608782.87	40°13'28.7601"N	80°36'29.0746"W	10638.20	158.189	0.58	0.18	-0.55
20575.00	89.510	158.560	5839.73	10705.50	-9961.12	3986.45	1749848.80	14608698.47	40°13'27.9243"N	80°36'28.6419"W	10729.19	158.189	1.09	0.44	1.00
20665.00	89.140	157.880	5840.79	10795.29	-10044.68	4019.84	1749882.18	14608614.94	40°13'27.0970"N	80°36'28.2162"W	10819.19	158.189	0.86	-0.41	-0.76
20758.00	89.230	157.700	5842.12	10888.12	-10130.78	4054.99	1749917.32	14608528.88	40°13'26.2447"N	80°36'27.7680"W	10912.18	158.186	0.22	0.10	-0.19
20850.00	89.230	158.140	5843.35	10979.93	-10216.02	4089.57	1749951.88	14608443.67	40°13'25.4008"N	80°36'27.3271"W	11004.17	158.183	0.48	0.00	0.48
20940.00	89.110	158.410	5844.66	11069.71	-10299.62	4122.88	1749985.18	14608360.10	40°13'24.5733"N	80°36'26.9024"W	11094.16	158.184	0.33	-0.13	0.30
21031.00	89.420	157.960	5845.82	11160.51	-10384.09	4156.70	1750018.98	14608275.66	40°13'23.7370"N	80°36'26.4713"W	11185.15	158.184	0.60	0.34	-0.49
21123.00	89.170	158.120	5846.96	11252.31	-10469.41	4191.10	1750053.37	14608190.37	40°13'22.8924"N	80°36'26.0327"W	11277.14	158.183	0.32	-0.27	0.17
21213.00	89.260	157.620	5848.19	11342.14	-10552.78	4225.00	1750087.25	14608107.04	40°13'22.0672"N	80°36'25.6004"W	11367.13	158.180	0.56	0.10	-0.56
21304.00	89.110	158.030	5849.48	11432.96	-10637.04	4259.34	1750121.58	14608022.82	40°13'21.2330"N	80°36'25.1625"W	11458.12	158.178	0.48	-0.16	0.45
21394.00	89.110	158.000	5850.88	11522.77	-10720.48	4293.03	1750155.26	14607939.40	40°13'20.4069"N	80°36'24.7330"W	11548.11	158.176	0.03	0.00	-0.03
21487.00	89.140	158.690	5852.30	11615.54	-10806.91	4327.35	1750189.56	14607853.01	40°13'19.5514"N	80°36'24.2955"W	11641.10	158.178	0.74	0.03	0.74
21579.00	89.170	158.040	5853.66	11707.30	-10892.42	4361.26	1750223.46	14607767.53	40°13'18.7049"N	80°36'23.8632"W	11733.09	158.179	0.71	0.03	-0.71
21670.00	89.110	157.680	5855.03	11798.12	-10976.70	4395.55	1750257.74	14607683.29	40°13'17.8706"N	80°36'23.4260"W	11824.07	158.177	0.40	-0.07	-0.40
21760.00	89.170	157.900	5856.38	11887.96	-11060.01	4429.57	1750291.74	14607600.01	40°13'17.0458"N	80°36'22.9922"W	11914.06	158.174	0.25	0.07	0.24
21851.00	88.340	158.150	5858.35	11978.75	-11144.38	4463.61	1750325.78	14607515.67	40°13'16.2106"N	80°36'22.5582"W	12005.04	158.173	0.95	-0.91	0.27
21941.00	88.280	156.740	5861.01	12068.58	-11227.45	4498.12	1750360.27	14607432.63	40°13'15.3881"N	80°36'22.1181"W	12094.99	158.167	1.57	-0.07	-1.57
22032.00	89.230	156.920	5862.98	12159.47	-11311.09	4533.91	1750396.05	14607349.02	40°13'14.5600"N	80°36'21.6614"W	12185.94	158.157	1.06	1.04	0.20
22123.00	89.230	157.040	5864.21	12250.37	-11394.84	4569.50	1750431.62	14607265.31	40°13'13.7309"N	80°36'21.2075"W	12276.92	158.148	0.13	0.00	0.13
22213.00	89.050	157.760	5865.56	12340.24	-11477.92	4604.08	1750466.19	14607182.26	40°13'12.9084"N	80°36'20.7665"W	12366.90	158.143	0.82	-0.20	0.80
22304.00	88.890	158.000	5867.19	12431.05	-11562.21	4638.34	1750500.43	14607098.00	40°13'12.0740"N	80°36'20.3297"W	12457.88	158.141	0.32	-0.18	0.26
22394.00	89.110	158.380	5868.77	12520.84	-11645.75	4671.77	1750533.85	14607014.49	40°13'11.2469"N	80°36'19.9035"W	12547.87	158.141	0.49	0.24	0.42
22486.00	89.480	158.620	5869.90	12612.59	-11731.34	4705.49	1750567.56	14606928.93	40°13'10.3997"N	80°36'19.4738"W	12639.86	158.144	0.48	0.40	0.26
22577.00	89.480	157.590	5870.72	12703.40	-11815.78	4739.42	1750601.48	14606844.53	40°13'9.5638"N	80°36'19.0412"W	12730.85	158.144	1.13	0.00	-1.13
22667.00	90.120	158.470	5871.04	12793.21	-11899.24	4773.09	1750635.13	14606761.10	40°13'8.7376"N	80°36'18.6119"W	12820.85	158.143	1.21	0.71	0.98
22758.00	89.450	158.270	5871.38	12883.99	-11983.83	4806.63	1750668.66	14606676.55	40°13'7.9002"N	80°36'18.1844"W	12911.85	158.145	0.77	-0.74	-0.22
22848.00	89.660	158.550	5872.08	12973.76	-12067.51	4839.75	1750701.77	14606592.90	40°13'7.0718"N	80°36'17.7623"W	13001.85	158.146	0.39	0.23	0.31
22881.00	89.050	158.430	5872.45	13006.68	-12098.21	4851.85	1750713.86	14606562.21	40°13'6.7679"N	80°36'17.6081"W	13034.84	158.147	1.88	-1.85	-0.36
22906.00	89.050	158.430	5872.86	13031.61	-12121.46	4861.04	1750723.05	14606538.97	40°13'6.5378"N	80°36'17.4910"W	13059.84	158.148	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Violet Coss BRK 6H AWB Ref Wellpath: Violet Coss BRK 6H AWP Proj: 22906'									
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	99.99	0.00	0.00	0.22	0.98

HOLE & CASING SECTIONS - Ref Wellbore: Violet Coss BRK 6H AWB Ref Wellpath: Violet Coss BRK 6H AWP Proj: 22906'									
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]
17.5in Open Hole	100.00	384.00	284.00	99.99	383.95	0.22	0.98	-2.03	5.11
13.375in Casing Surface	26.00	384.00	358.00	26.00	383.95	0.00	0.00	-2.03	5.11
12.25in Open Hole	384.00	1650.00	1266.00	383.95	1631.50	-2.03	5.11	148.52	-75.58
9.625in Casing Intermediate	26.00	1630.00	1604.00	26.00	1612.41	0.00	0.00	144.06	-71.58
8.5in Open Hole	1650.00	22906.00	21256.00	1631.50	5872.86	148.52	-75.58	-12121.46	4861.04
5.5in Casing Production	26.00	22906.00	22880.00	26.00	5872.86	0.00	0.00	-12121.46	4861.04

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Violet Coss BRK 6H LP Rev-8	5676.00	1915.09	-1870.77	1743993.86	14620570.05	40°15'25.5318"N	80°37'43.5113"W	point
Violet Cross BRK 6H BHL Rev-7	5812.00	-12122.07	4860.75	1750722.76	14606538.36	40°13'6.5317"N	80°36'17.4947"W	point

WELLPATH COMPOSITION - Ref Wellbore: Violet Coss BRK 6H AWB Ref Wellpath: Violet Coss BRK 6H AWP Proj: 22906'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	357.00	Gyrodata 2015 - GC+WIR+DPIPE	01_Gyrodata <17-1/2"> (50'-357')	Violet Coss BRK 6H AWB	11/30/2020
357.00	1561.00	OWSG MWD rev2 + HRGM	02_Premier MWD <12-1/4"> (496'-1561')	Violet Coss BRK 6H AWB	11/30/2020
1561.00	22906.00	BH AutoTrak Curve (2019) (Short spacing)	03_BH AT Curve <8-1/2"> (1729'-22881')	Violet Coss BRK 6H AWB	11/30/2020

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Violet Coss BRK 6H
Field	Brooke	API	47009002400000
Facility	Violet Coss BRK Pad	Wellbore	Violet Coss BRK 6H AWB
Slot	Slot 6H		

COMMENTS
<p>Wellpath general comments API: 47-009-00240-0000 BH Job #: 110647643 Rig: SDC 40 Duration: 12/01/2020 - 12/07/2020</p>

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