

SWN PRODUCTION COMPANY, LLC



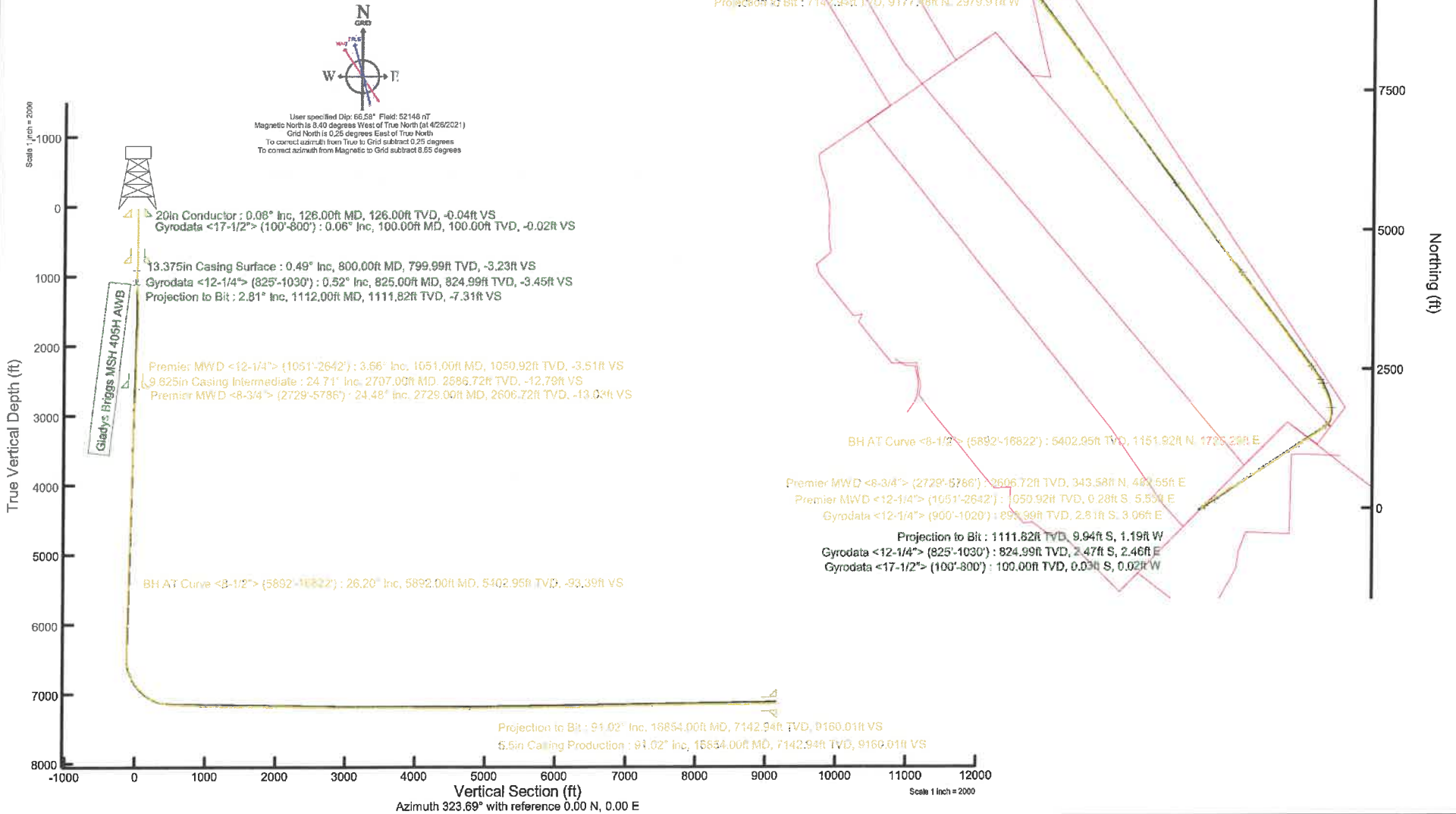
Location: Marshall County, WV Slot: Slot 405H
 Field: Marshall Well: Gladys Briggs MSH 405H ST01
 Facility: Gladys Briggs MSH Pad Wellbore: Gladys Briggs MSH 405H ST01 PWB

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Gladys Briggs MSH Pad	1748342.310	14442131.690	39°46'1.2972"N	80°36'57.3264"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot 405H	48.73	50.22	1748392.510	14442180.400	39°46'1.7786"N
SDC 41 (KB) to Mud line (At Slot: Slot 405H)					26ft
Mean Sea Level to Mud line (At Slot: Slot 405H)					-1382.6ft
SDC 41 (KB) to Mean Sea Level					1408.6ft

Plus reference wellpath is Gladys Briggs MSH 405H ST01 PWP Rev C.0	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC 41 (KB)	North Reference: Grid north
Reference wellpath measured depths are referenced to SDC 41 (KB)	Scale: True distance
SDC 41 (KB) to Mean Sea Level: 1408.6 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Mud line (At Slot: Slot 405H): -1382.6 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: alorjen on 2021-05-28; Database: WA_MPL_EASTERNUS_Deft

API: 47-051-02371-0100
 BH Job #: 110870191
 Rig: SDC 41
 Duration: 05/24/2021 - 05/26/2021

Scale 1 inch = 2500
 Easting (ft)
 -10000 -7500 -5000 -2500 0 2500



REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 405H ST01
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 405H ST01 AWB
Slot	Slot 405H	Sidetrack from	Gladys Briggs MSH 405H AWP Proj: 1112' at 800.00 MD

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	5/28/2021 at 4:41:10 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	48.73	50.22	1748392.51	14442180.40	39°46'1.7766"N	80°36'56.6806"W
Facility Reference Pt			1748342.31	14442131.69	39°46'1.2972"N	80°36'57.3264"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM			
Calculation method	Minimum curvature	SDC 41 (KB) to Facility Vertical Datum	1408.60ft
Horizontal Reference Pt	Slot	SDC 41 (KB) to Mean Sea Level	1408.60ft
Vertical Reference Pt	SDC 41 (KB)	SDC 41 (KB) to Mud Line at Slot (Slot 405H)	26.00ft
MD Reference Pt	SDC 41 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	323.69°

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Slot	Slot 405H	Sidetrack from	Gladys Briggs MSH 405H AWP Proj: 1112' at 800.00 MD

WELLPATH DATA (201 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	210.510	0.00	0.00	0.00	0.00	1748392.51	14442180.40	39°46'1.7766"N	80°36'56.6806"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	210.510	26.00	0.00	0.00	0.00	1748392.51	14442180.40	39°46'1.7766"N	80°36'56.6806"W	0.00	0.000	0.00	0.00	0.00
100.00	0.060	210.510	100.00	-0.02	-0.03	-0.02	1748392.49	14442180.37	39°46'1.7763"N	80°36'56.6809"W	0.04	210.510	0.08	0.08	0.00
200.00	0.190	139.710	200.00	-0.20	-0.20	0.06	1748392.57	14442180.20	39°46'1.7746"N	80°36'56.6798"W	0.21	163.435	0.18	0.13	-70.80
300.00	0.220	139.210	300.00	-0.56	-0.48	0.29	1748392.80	14442179.92	39°46'1.7719"N	80°36'56.6769"W	0.56	148.375	0.03	0.03	-0.50
400.00	0.300	136.990	400.00	-1.01	-0.81	0.60	1748393.11	14442179.59	39°46'1.7686"N	80°36'56.6730"W	1.01	143.701	0.08	0.08	-2.22
500.00	0.320	116.550	500.00	-1.52	-1.13	1.03	1748393.54	14442179.27	39°46'1.7654"N	80°36'56.6675"W	1.53	137.758	0.11	0.02	-20.44
525.00	0.240	132.600	525.00	-1.63	-1.20	1.13	1748393.64	14442179.20	39°46'1.7647"N	80°36'56.6662"W	1.64	136.713	0.45	-0.32	64.20
550.00	0.300	141.900	550.00	-1.75	-1.28	1.21	1748393.72	14442179.12	39°46'1.7639"N	80°36'56.6652"W	1.76	136.784	0.30	0.24	37.20
575.00	0.410	133.700	575.00	-1.90	-1.40	1.31	1748393.82	14442179.00	39°46'1.7628"N	80°36'56.6639"W	1.92	136.814	0.48	0.44	-32.80
600.00	0.310	135.350	600.00	-2.06	-1.51	1.42	1748393.93	14442178.89	39°46'1.7617"N	80°36'56.6625"W	2.07	136.632	0.40	-0.40	6.60
625.00	0.260	137.430	624.99	-2.18	-1.60	1.51	1748394.02	14442178.80	39°46'1.7608"N	80°36'56.6614"W	2.20	136.613	0.20	-0.20	8.32
650.00	0.300	143.200	649.99	-2.30	-1.69	1.59	1748394.10	14442178.71	39°46'1.7598"N	80°36'56.6604"W	2.32	136.819	0.20	0.16	23.08
675.00	0.340	136.810	674.99	-2.44	-1.80	1.68	1748394.19	14442178.60	39°46'1.7588"N	80°36'56.6592"W	2.46	136.988	0.21	0.16	-25.56
700.00	0.350	129.240	699.99	-2.59	-1.90	1.79	1748394.30	14442178.50	39°46'1.7578"N	80°36'56.6578"W	2.61	136.757	0.19	0.04	-30.28
725.00	0.360	134.820	724.99	-2.74	-2.00	1.90	1748394.41	14442178.40	39°46'1.7567"N	80°36'56.6564"W	2.76	136.495	0.14	0.04	22.32
750.00	0.340	126.110	749.99	-2.89	-2.10	2.02	1748394.53	14442178.30	39°46'1.7558"N	80°36'56.6549"W	2.91	136.186	0.23	-0.08	-34.84
775.00	0.410	126.260	774.99	-3.04	-2.20	2.15	1748394.66	14442178.20	39°46'1.7548"N	80°36'56.6532"W	3.07	135.657	0.28	0.28	0.60
800.00	0.490	131.660	799.99	-3.23	-2.32	2.30	1748394.81	14442178.08	39°46'1.7536"N	80°36'56.6513"W	3.27	135.271	0.36	0.32	21.60
900.00	0.550	115.010	899.99	-4.07	-2.81	3.06	1748395.56	14442177.59	39°46'1.7487"N	80°36'56.6416"W	4.15	132.604	0.16	0.06	-16.65
925.00	0.500	93.190	924.99	-4.25	-2.87	3.27	1748395.78	14442177.53	39°46'1.7482"N	80°36'56.6389"W	4.35	131.214	0.82	-0.20	-87.28
950.00	0.880	64.160	949.98	-4.35	-2.79	3.55	1748396.06	14442177.61	39°46'1.7489"N	80°36'56.6352"W	4.52	128.119	2.02	1.52	-116.12
975.00	1.150	55.800	974.98	-4.40	-2.56	3.94	1748396.44	14442177.84	39°46'1.7511"N	80°36'56.6304"W	4.70	123.093	1.23	1.08	-33.44
1000.00	1.530	44.270	999.97	-4.35	-2.18	4.38	1748396.88	14442178.22	39°46'1.7548"N	80°36'56.6247"W	4.89	116.531	1.86	1.52	-46.12
1020.00	2.240	34.870	1019.96	-4.18	-1.67	4.79	1748397.29	14442178.73	39°46'1.7599"N	80°36'56.6194"W	5.07	109.266	3.86	3.55	-47.00
1051.00	3.660	24.950	1050.92	-3.51	-0.28	5.55	1748398.06	14442180.12	39°46'1.7736"N	80°36'56.6096"W	5.56	92.872	4.85	4.58	-32.00
1139.00	6.500	30.740	1138.57	-0.22	6.55	9.28	1748401.79	14442186.95	39°46'1.8410"N	80°36'56.5614"W	11.36	54.784	3.28	3.23	6.58
1232.00	10.210	36.730	1230.57	4.24	17.69	16.90	1748409.41	14442198.08	39°46'1.9507"N	80°36'56.4632"W	24.46	43.705	4.09	3.99	6.44
1324.00	13.700	39.830	1320.56	9.23	32.59	28.76	1748421.26	14442212.98	39°46'2.0975"N	80°36'56.3105"W	43.47	41.428	3.86	3.79	3.37
1412.00	16.030	48.550	1405.62	12.82	48.64	44.55	1748437.04	14442229.02	39°46'2.2554"N	80°36'56.1075"W	65.96	42.485	3.66	2.65	9.91

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Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 405H ST01
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 405H ST01 AWB
Slot	Slot 405H	Sidetrack from	Gladys Briggs MSH 405H AWP Proj: 1112' at 800.00 MD

WELLPATH DATA (201 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]
1503.00	18.880	53.250	1492.42	14.06	65.77	65.77	1748458.25	14442246.15	39°46'2.4238"N	80°36'55.8348"W	93.01	44.998	3.49	3.13	5.16
1595.00	20.080	55.210	1579.16	13.75	83.69	90.67	1748483.14	14442264.06	39°46'2.5999"N	80°36'55.5149"W	123.39	47.291	1.49	1.30	2.13
1686.00	21.570	57.730	1664.21	12.16	101.54	117.64	1748510.10	14442281.90	39°46'2.7751"N	80°36'55.1685"W	155.40	49.202	1.91	1.64	2.77
1775.00	22.670	61.440	1746.66	8.69	118.47	146.54	1748538.99	14442298.83	39°46'2.9412"N	80°36'54.7975"W	188.44	51.046	2.00	1.24	4.17
1864.00	22.100	61.620	1828.95	4.07	134.63	176.33	1748568.78	14442314.98	39°46'3.0996"N	80°36'54.4150"W	221.85	52.639	0.65	-0.64	0.20
1956.00	21.690	59.560	1914.32	-0.06	151.47	206.22	1748598.65	14442331.81	39°46'3.2648"N	80°36'54.0314"W	255.87	53.703	0.95	-0.45	-2.24
2047.00	21.810	57.070	1998.84	-2.77	169.18	234.91	1748627.33	14442349.51	39°46'3.4386"N	80°36'53.6631"W	289.49	54.239	1.02	0.13	-2.74
2139.00	28.860	55.290	2081.94	-4.40	191.14	267.54	1748659.95	14442371.47	39°46'3.6542"N	80°36'53.2439"W	328.81	54.457	7.71	7.66	-1.93
2232.00	28.240	55.610	2163.63	-5.77	216.35	304.15	1748696.54	14442396.66	39°46'3.9018"N	80°36'52.7737"W	373.25	54.575	0.69	-0.67	0.34
2321.00	28.680	55.110	2241.88	-7.00	240.46	339.04	1748731.42	14442420.76	39°46'4.1386"N	80°36'52.3255"W	415.66	54.655	0.56	0.49	-0.56
2413.00	27.350	54.990	2323.10	-8.03	265.21	374.46	1748766.83	14442445.51	39°46'4.3817"N	80°36'51.8706"W	458.87	54.692	1.45	-1.45	-0.13
2504.00	26.920	55.240	2404.08	-9.06	288.95	408.51	1748800.86	14442469.24	39°46'4.6148"N	80°36'51.4333"W	500.37	54.727	0.49	-0.47	0.27
2593.00	26.130	56.530	2483.71	-10.57	311.24	441.41	1748833.75	14442491.52	39°46'4.8338"N	80°36'51.0107"W	540.11	54.812	1.10	-0.89	1.45
2642.00	25.410	56.670	2527.84	-11.66	322.97	459.19	1748851.53	14442503.25	39°46'4.9489"N	80°36'50.7823"W	561.40	54.880	1.47	-1.47	0.29
2729.00	24.480	54.960	2606.72	-13.03	343.58	489.55	1748881.87	14442523.84	39°46'5.1513"N	80°36'50.3924"W	598.08	54.938	1.35	-1.07	-1.97
2788.00	25.410	56.220	2660.22	-13.86	357.63	510.08	1748902.39	14442537.89	39°46'5.2893"N	80°36'50.1287"W	622.96	54.964	1.82	1.58	2.14
2880.00	28.610	61.700	2742.19	-17.80	379.06	545.90	1748938.19	14442559.31	39°46'5.4995"N	80°36'49.6689"W	664.60	55.225	4.40	3.48	5.96
2972.00	29.350	61.320	2822.67	-23.86	400.32	585.07	1748977.35	14442580.57	39°46'5.7080"N	80°36'49.1660"W	708.92	55.619	0.83	0.80	-0.41
3064.00	29.990	59.440	2902.61	-29.16	422.84	624.65	1749016.92	14442603.07	39°46'5.9288"N	80°36'48.6579"W	754.31	55.905	1.23	0.70	-2.04
3155.00	30.270	58.500	2981.31	-33.36	446.38	663.79	1749056.04	14442626.61	39°46'6.1598"N	80°36'48.1553"W	799.92	56.080	0.60	0.31	-1.03
3247.00	28.680	58.090	3061.40	-37.00	470.17	702.30	1749094.54	14442650.39	39°46'6.3933"N	80°36'47.6608"W	845.16	56.199	1.74	-1.73	-0.45
3338.00	28.050	56.140	3141.48	-39.59	493.63	738.61	1749130.83	14442673.84	39°46'6.6236"N	80°36'47.1946"W	888.38	56.244	1.23	-0.69	-2.14
3430.00	26.110	53.020	3223.39	-40.28	517.87	772.75	1749164.96	14442698.07	39°46'6.8616"N	80°36'46.7560"W	930.23	56.172	2.61	-2.11	-3.39
3520.00	26.550	53.880	3304.05	-40.11	541.64	804.82	1749197.01	14442721.83	39°46'7.0952"N	80°36'46.3440"W	970.10	56.060	0.65	0.49	0.96
3611.00	27.090	55.120	3385.27	-40.70	565.47	838.24	1749230.43	14442745.65	39°46'7.3293"N	80°36'45.9146"W	1011.15	55.997	0.85	0.59	1.36
3701.00	27.780	56.250	3465.14	-42.14	588.85	872.49	1749264.67	14442769.02	39°46'7.5588"N	80°36'45.4747"W	1052.61	55.985	0.96	0.77	-1.26
3793.00	28.460	57.850	3546.29	-44.69	612.42	908.88	1749301.04	14442792.58	39°46'7.7903"N	80°36'45.0074"W	1095.96	56.027	1.10	0.74	1.74
3885.00	27.030	57.700	3627.71	-47.74	635.26	945.11	1749337.26	14442815.41	39°46'8.0144"N	80°36'44.5422"W	1138.77	56.093	1.56	-1.55	-0.16
3974.00	27.720	58.440	3706.74	-50.87	656.90	979.85	1749371.97	14442837.04	39°46'8.2268"N	80°36'44.0962"W	1179.67	56.162	0.86	0.78	0.83
4065.00	28.560	58.260	3786.98	-54.36	679.42	1016.38	1749408.49	14442859.56	39°46'8.4478"N	80°36'43.6270"W	1222.55	56.238	0.93	0.92	-0.20

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Slot	Slot 405H	Sidetrack from	Gladys Briggs MSH 405H AWP Proj: 1112' at 800.00 MD

WELLPATH DATA (201 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]
4155.00	29.190	55.910	3865.79	-56.92	703.04	1052.85	1749444.95	14442883.17	39°46'8.6797"N	80°36'43.1586"W	1266.00	56.267	1.44	0.70	-2.61
4244.00	28.870	56.170	3943.61	-58.69	727.17	1088.67	1749480.76	14442907.28	39°46'8.9165"N	80°36'42.6986"W	1309.19	56.260	0.39	-0.36	0.29
4334.00	27.800	55.830	4022.83	-60.42	751.05	1124.09	1749516.16	14442931.16	39°46'9.1511"N	80°36'42.2437"W	1351.91	56.251	1.20	-1.19	-0.38
4424.00	27.560	56.120	4102.53	-62.08	774.45	1158.74	1749550.80	14442954.54	39°46'9.3808"N	80°36'41.7987"W	1393.71	56.243	0.31	-0.27	0.32
4514.00	27.970	55.230	4182.17	-63.53	798.09	1193.36	1749585.41	14442978.18	39°46'9.6130"N	80°36'41.3540"W	1435.64	56.226	0.65	0.46	-0.99
4606.00	27.180	55.940	4263.72	-64.94	822.16	1228.49	1749620.52	14443002.24	39°46'9.8493"N	80°36'40.9027"W	1478.22	56.208	0.93	-0.86	0.77
4697.00	27.250	57.760	4344.64	-67.23	844.91	1263.33	1749655.35	14443024.99	39°46'10.0727"N	80°36'40.4553"W	1519.83	56.225	0.92	0.08	2.00
4785.00	27.610	57.170	4422.75	-69.90	866.72	1297.51	1749689.51	14443046.78	39°46'10.2867"N	80°36'40.0164"W	1560.36	56.258	0.51	0.41	-0.67
4875.00	29.130	57.100	4501.94	-72.47	889.92	1333.43	1749725.42	14443069.98	39°46'10.5145"N	80°36'39.5551"W	1603.12	56.281	1.69	1.69	-0.08
4968.00	28.990	56.510	4583.23	-74.93	914.65	1371.23	1749763.20	14443094.70	39°46'10.7573"N	80°36'39.0696"W	1648.29	56.295	0.34	-0.15	-0.63
5058.00	27.740	55.530	4662.42	-76.67	938.55	1406.68	1749798.65	14443118.58	39°46'10.9919"N	80°36'38.6142"W	1691.04	56.289	1.48	-1.39	-1.09
5149.00	27.350	56.580	4743.11	-78.40	962.05	1441.59	1749833.54	14443142.07	39°46'11.2226"N	80°36'38.1658"W	1733.12	56.283	0.68	-0.43	1.15
5240.00	27.660	56.500	4823.82	-80.49	985.22	1476.65	1749868.59	14443165.23	39°46'11.4501"N	80°36'37.7155"W	1775.15	56.289	0.34	0.34	-0.09
5333.00	28.270	55.590	4905.96	-82.28	1009.58	1512.82	1749904.75	14443189.58	39°46'11.6893"N	80°36'37.2509"W	1818.76	56.283	0.80	0.66	-0.98
5424.00	28.690	58.510	4985.96	-84.83	1033.17	1549.23	1749941.14	14443213.16	39°46'11.9209"N	80°36'36.7834"W	1862.14	56.301	1.60	0.46	3.21
5514.00	26.810	56.240	5065.60	-87.55	1055.73	1584.53	1749976.43	14443235.72	39°46'12.1424"N	80°36'36.3300"W	1904.03	56.326	2.40	-2.09	-2.52
5604.00	25.780	55.440	5146.29	-89.05	1078.11	1617.52	1750009.41	14443258.10	39°46'12.3621"N	80°36'35.9063"W	1943.89	56.316	1.21	-1.14	-0.89
5695.00	27.130	55.160	5227.76	-90.19	1101.19	1650.85	1750042.72	14443281.17	39°46'12.5888"N	80°36'35.4782"W	1984.42	56.295	1.49	1.48	-0.31
5786.00	27.790	55.680	5308.51	-91.46	1125.01	1685.40	1750077.26	14443304.97	39°46'12.8226"N	80°36'35.0344"W	2026.38	56.277	0.77	0.73	0.57
5892.00	26.200	56.320	5402.95	-93.39	1151.92	1725.29	1750117.12	14443331.87	39°46'13.0869"N	80°36'34.5221"W	2074.49	56.270	1.52	-1.50	0.60
5979.00	27.690	57.320	5480.51	-95.55	1173.48	1758.28	1750150.11	14443353.43	39°46'13.2986"N	80°36'34.0983"W	2113.91	56.281	1.79	1.71	1.15
6070.00	25.960	57.020	5561.71	-98.05	1195.74	1792.79	1750184.60	14443375.68	39°46'13.5171"N	80°36'33.6551"W	2154.97	56.298	1.91	-1.90	-0.33
6160.00	25.660	56.720	5642.73	-100.22	1217.16	1825.60	1750217.41	14443397.09	39°46'13.7273"N	80°36'33.2337"W	2194.15	56.308	0.36	-0.33	-0.33
6251.00	27.300	57.570	5724.18	-102.67	1239.16	1859.69	1750251.48	14443419.08	39°46'13.9433"N	80°36'32.7959"W	2234.72	56.323	1.85	1.80	0.93
6341.00	27.900	57.720	5803.94	-105.55	1261.48	1894.92	1750286.69	14443441.39	39°46'14.1623"N	80°36'32.3436"W	2276.41	56.348	0.67	0.67	0.17
6433.00	27.630	55.750	5885.35	-107.83	1284.98	1930.75	1750322.51	14443464.88	39°46'14.3930"N	80°36'31.8833"W	2319.26	56.355	1.04	-0.29	-2.14
6525.00	28.320	55.180	5966.60	-109.16	1309.45	1966.30	1750358.04	14443489.34	39°46'14.6333"N	80°36'31.4267"W	2362.41	56.339	0.80	0.75	-0.62
6615.00	28.600	55.380	6045.72	-110.36	1333.88	2001.55	1750393.28	14443513.76	39°46'14.8732"N	80°36'30.9739"W	2405.29	56.320	0.33	0.31	0.22
6707.00	28.400	55.590	6126.58	-111.73	1358.75	2037.72	1750429.44	14443538.62	39°46'15.1174"N	80°36'30.5092"W	2449.19	56.305	0.24	-0.22	0.23
6800.00	27.770	55.340	6208.62	-113.09	1383.57	2073.79	1750465.49	14443563.43	39°46'15.3611"N	80°36'30.0459"W	2492.96	56.290	0.69	-0.68	-0.27

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 405H ST01
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 405H ST01 AWB
Slot	Slot 405H	Sidetrack from	Gladys Briggs MSH 405H AWP Proj: 1112' at 800.00 MD

WELLPATH DATA (201 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]
6892.00	25.090	55.120	6291.00	-114.19	1406.92	2107.43	1750499.12	14443586.77	39°46'15.5904"N	80°36'29.6138"W	2533.90	56.273	2.91	-2.91	-0.24
6984.00	28.860	55.430	6372.98	-115.35	1430.68	2141.72	1750533.40	14443610.52	39°46'15.8238"N	80°36'29.1733"W	2575.62	56.257	4.10	4.10	0.34
7077.00	28.780	55.320	6454.46	-116.67	1456.15	2178.61	1750570.28	14443635.99	39°46'16.0739"N	80°36'28.6994"W	2620.45	56.242	0.10	-0.09	-0.12
7167.00	29.400	43.670	6533.17	-113.44	1484.48	2211.71	1750603.36	14443664.30	39°46'16.3525"N	80°36'28.2739"W	2663.71	56.131	6.32	0.69	-12.94
7260.00	29.590	33.380	6614.17	-101.49	1520.19	2240.12	1750631.76	14443700.00	39°46'16.7041"N	80°36'27.9080"W	2707.24	55.838	5.45	0.20	-11.06
7352.00	33.040	25.830	6692.79	-81.87	1561.76	2263.57	1750655.20	14443741.55	39°46'17.1139"N	80°36'27.6055"W	2750.06	55.396	5.67	3.75	-8.21
7443.00	37.870	17.400	6766.93	-53.72	1610.80	2282.75	1750674.37	14443790.58	39°46'17.5977"N	80°36'27.3571"W	2793.86	54.792	7.54	5.31	-9.26
7536.00	41.860	6.430	6838.39	-13.96	1668.97	2294.78	1750686.40	14443848.72	39°46'18.1721"N	80°36'27.1997"W	2837.51	53.972	8.68	4.29	-11.80
7628.00	45.680	358.530	6904.87	35.65	1732.45	2297.38	1750688.99	14443912.17	39°46'18.7993"N	80°36'27.1629"W	2877.38	52.980	7.24	4.15	-8.59
7721.00	49.000	352.540	6967.91	93.74	1800.55	2291.96	1750683.58	14443980.25	39°46'19.4726"N	80°36'27.2284"W	2914.63	51.847	5.93	3.57	-6.44
7814.00	55.990	345.580	7024.54	160.37	1872.83	2277.78	1750669.40	14444052.50	39°46'20.1875"N	80°36'27.4060"W	2948.86	50.572	9.57	7.52	-7.48
7905.00	62.740	340.580	7070.90	234.19	1947.62	2254.90	1750646.54	14444127.27	39°46'20.9276"N	80°36'27.6948"W	2979.57	49.182	8.79	7.42	-5.49
7998.00	70.150	335.640	7108.06	316.69	2026.60	2223.06	1750614.70	14444206.21	39°46'21.7095"N	80°36'28.0982"W	3008.17	47.647	9.33	7.97	-5.31
8089.00	77.120	336.270	7133.69	401.96	2106.29	2187.51	1750579.17	14444285.87	39°46'22.4986"N	80°36'28.5490"W	3036.72	46.084	7.69	7.66	0.69
8182.00	84.110	335.510	7148.84	491.59	2189.99	2150.05	1750541.72	14444369.54	39°46'23.3274"N	80°36'29.0241"W	3069.00	44.473	7.56	7.52	-0.82
8272.00	88.060	329.950	7154.99	580.21	2269.75	2108.92	1750500.61	14444449.26	39°46'24.1174"N	80°36'29.5463"W	3098.27	42.897	7.57	4.39	-6.18
8364.00	88.860	327.620	7157.46	671.81	2348.39	2061.26	1750452.97	14444527.88	39°46'24.8966"N	80°36'30.1523"W	3124.70	41.275	2.68	0.87	-2.53
8455.00	88.060	325.910	7159.91	762.64	2424.48	2011.41	1750403.14	14444603.93	39°46'25.6507"N	80°36'30.7866"W	3150.21	39.680	2.07	-0.88	-1.88
8545.00	88.180	323.920	7162.86	852.57	2498.08	1959.71	1750351.46	14444677.51	39°46'26.3803"N	80°36'31.4446"W	3175.04	38.114	2.21	0.13	-2.21
8636.00	87.880	323.730	7165.99	943.51	2571.49	1906.03	1750297.80	14444750.89	39°46'27.1082"N	80°36'32.1280"W	3200.86	36.546	0.39	-0.33	-0.21
8726.00	89.230	323.770	7168.26	1033.48	2644.05	1852.83	1750244.62	14444823.42	39°46'27.8275"N	80°36'32.8053"W	3228.62	35.021	1.50	1.50	0.04
8817.00	89.290	323.680	7169.44	1124.47	2717.40	1798.99	1750190.80	14444896.75	39°46'28.5548"N	80°36'33.4907"W	3258.94	33.506	0.12	0.07	-0.10
8907.00	89.230	323.750	7170.60	1214.47	2789.95	1745.73	1750137.57	14444969.26	39°46'29.2740"N	80°36'34.1688"W	3291.11	32.035	0.10	-0.07	0.08
8998.00	89.140	323.770	7171.89	1305.46	2863.33	1691.94	1750083.80	14445042.62	39°46'30.0016"N	80°36'34.8536"W	3325.86	30.579	0.10	-0.10	0.02
9088.00	89.350	323.800	7173.08	1395.45	2935.94	1638.77	1750030.65	14445115.20	39°46'30.7214"N	80°36'35.5305"W	3362.34	29.169	0.24	0.23	0.03
9179.00	89.750	323.840	7173.79	1486.45	3009.39	1585.06	1749976.95	14445188.62	39°46'31.4496"N	80°36'36.2144"W	3401.30	27.776	0.44	0.44	0.04
9269.00	89.230	323.790	7174.59	1576.44	3082.03	1531.92	1749923.84	14445261.23	39°46'32.1697"N	80°36'36.8909"W	3441.76	26.430	0.58	-0.58	-0.06
9360.00	89.600	323.930	7175.52	1667.44	3155.51	1478.26	1749870.19	14445334.69	39°46'32.8982"N	80°36'37.5741"W	3484.61	25.102	0.43	0.41	0.15
9450.00	89.600	323.620	7176.15	1757.43	3228.11	1425.07	1749817.03	14445407.26	39°46'33.6180"N	80°36'38.2512"W	3528.68	23.819	0.34	0.00	-0.34
9540.00	89.290	324.310	7177.02	1847.43	3300.89	1372.13	1749764.11	14445480.01	39°46'34.3395"N	80°36'38.9252"W	3574.72	22.572	0.84	-0.34	0.77

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 405H ST01
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 405H ST01 AWB
Slot	Slot 405H	Sidetrack from	Gladys Briggs MSH 405H AWP Proj: 1112' at 800.00 MD

WELLPATH DATA (201 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]
9629.00	89.260	323.530	7178.15	1936.42	3372.81	1319.72	1749711.72	14445551.90	39°46'35.0525"N	80°36'39.5925"W	3621.81	21.370	0.88	-0.03	-0.88
9720.00	88.860	323.170	7179.64	2027.40	3445.81	1265.41	1749657.43	14445624.87	39°46'35.7763"N	80°36'40.2841"W	3670.81	20.165	0.59	-0.44	-0.40
9810.00	88.890	323.370	7181.41	2117.38	3517.93	1211.60	1749603.63	14445696.96	39°46'36.4913"N	80°36'40.9693"W	3720.72	19.004	0.22	0.03	0.22
9901.00	88.520	323.070	7183.47	2208.36	3590.80	1157.12	1749549.18	14445769.80	39°46'37.2138"N	80°36'41.6629"W	3772.63	17.861	0.52	-0.41	-0.33
9992.00	89.200	324.190	7185.28	2299.34	3664.05	1103.17	1749495.25	14445843.03	39°46'37.9401"N	80°36'42.3498"W	3826.52	16.756	1.44	0.75	1.23
10083.00	88.980	323.100	7186.72	2390.33	3737.33	1049.24	1749441.34	14445916.28	39°46'38.6665"N	80°36'43.0366"W	3881.82	15.682	1.22	-0.24	-1.20
10173.00	90.550	325.190	7187.09	2480.31	3810.27	996.53	1749388.65	14445989.19	39°46'39.3896"N	80°36'43.7077"W	3938.43	14.657	2.90	1.74	2.32
10264.00	89.200	323.990	7187.29	2571.30	3884.43	943.80	1749335.94	14446063.32	39°46'40.1248"N	80°36'44.3789"W	3997.45	13.657	1.98	-1.48	-1.32
10355.00	88.610	322.790	7189.03	2662.28	3957.47	889.54	1749281.71	14446136.33	39°46'40.8489"N	80°36'45.0697"W	4056.21	12.668	1.47	-0.65	-1.32
10445.00	88.890	323.610	7190.99	2752.25	4029.51	835.64	1749227.83	14446208.35	39°46'41.5632"N	80°36'45.7561"W	4115.25	11.716	0.96	0.31	0.91
10535.00	89.140	322.140	7192.54	2842.23	4101.26	781.33	1749173.54	14446280.07	39°46'42.2746"N	80°36'46.4477"W	4175.02	10.796	1.66	0.28	-1.63
10626.00	90.030	325.230	7193.20	2933.21	4174.57	727.45	1749119.68	14446353.35	39°46'43.0014"N	80°36'47.1338"W	4237.48	9.885	3.53	0.98	3.40
10718.00	88.430	323.300	7194.44	3025.19	4249.24	673.73	1749065.98	14446427.99	39°46'43.7416"N	80°36'47.8178"W	4302.32	9.009	2.72	-1.74	-2.10
10811.00	90.980	324.500	7194.91	3118.18	4324.38	618.94	1749011.21	14446503.09	39°46'44.4864"N	80°36'48.5154"W	4368.44	8.145	3.03	2.74	1.29
10902.00	89.750	324.850	7194.33	3209.17	4398.62	566.32	1748958.61	14446577.31	39°46'45.2224"N	80°36'49.1852"W	4434.92	7.336	1.41	-1.35	0.38
10994.00	89.910	324.380	7194.61	3301.15	4473.62	513.05	1748905.36	14446652.28	39°46'45.9659"N	80°36'49.8634"W	4502.95	6.542	0.54	0.17	-0.51
11085.00	90.060	324.570	7194.63	3392.14	4547.68	460.17	1748852.50	14446726.32	39°46'46.7001"N	80°36'50.5366"W	4570.91	5.778	0.27	0.16	0.21
11177.00	90.060	324.350	7194.53	3484.14	4622.55	406.70	1748799.05	14446801.15	39°46'47.4422"N	80°36'51.2174"W	4640.40	5.028	0.24	0.00	-0.24
11269.00	90.550	324.780	7194.05	3576.12	4697.50	353.36	1748745.73	14446876.08	39°46'48.1852"N	80°36'51.8965"W	4710.77	-4.302	0.71	0.53	0.47
11360.00	90.030	323.930	7193.58	3667.11	4771.45	300.33	1748692.72	14446950.00	39°46'48.9183"N	80°36'52.5716"W	4780.89	3.602	1.09	-0.57	-0.93
11452.00	89.450	323.840	7194.00	3759.11	4845.77	246.10	1748638.52	14447024.29	39°46'49.6551"N	80°36'53.2621"W	4852.02	2.907	0.64	-0.63	-0.10
11543.00	89.450	324.390	7194.88	3850.11	4919.50	192.77	1748585.20	14447097.98	39°46'50.3859"N	80°36'53.9412"W	4923.27	2.244	0.60	0.00	0.60
11636.00	88.430	322.870	7196.60	3943.09	4994.36	137.63	1748530.08	14447172.82	39°46'51.1282"N	80°36'54.6433"W	4996.26	1.578	1.97	-1.10	-1.63
11726.00	89.570	323.950	7198.17	4033.07	5066.61	83.99	1748476.47	14447245.04	39°46'51.8445"N	80°36'55.3263"W	5067.31	0.950	1.74	1.27	1.20
11818.00	89.600	323.890	7198.83	4125.06	5140.97	29.81	1748422.31	14447319.37	39°46'52.5816"N	80°36'56.0162"W	5141.05	0.332	0.07	0.03	-0.07
11910.00	89.350	324.040	7199.68	4217.06	5215.36	-24.31	1748368.21	14447393.73	39°46'53.3190"N	80°36'56.7053"W	5215.42	359.733	0.32	-0.27	0.16
12003.00	89.660	324.600	7200.48	4310.05	5290.90	-78.55	1748313.99	14447469.24	39°46'54.0679"N	80°36'57.3959"W	5291.48	359.149	0.69	0.33	0.60
12093.00	89.050	323.510	7201.49	4400.04	5363.75	-131.37	1748261.19	14447542.07	39°46'54.7901"N	80°36'58.0686"W	5365.36	358.597	1.39	-0.68	-1.21
12184.00	90.280	324.690	7202.02	4491.03	5437.46	-184.73	1748207.85	14447615.75	39°46'55.5208"N	80°36'58.7480"W	5440.60	358.054	1.87	1.35	1.30
12275.00	89.540	324.320	7202.17	4582.02	5511.55	-237.57	1748155.03	14447689.81	39°46'56.2552"N	80°36'59.4207"W	5516.67	357.532	0.91	-0.81	-0.41

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 405H ST01
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 405H ST01 AWB
Slot	Slot 405H	Sidetrack from	Gladys Briggs MSH 405H AWP Proj: 1112' at 800.00 MD

WELLPATH DATA (201 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]
12366.00	88.610	323.970	7203.64	4673.01	5585.30	-290.86	1748101.76	14447763.53	39°46'56.9863"N	80°37'0.0993"W	5592.87	357.019	1.09	-1.02	-0.38
12457.00	90.250	323.860	7204.54	4764.00	5658.83	-344.46	1748048.19	14447837.03	39°46'57.7153"N	80°37'0.7817"W	5669.31	356.517	1.81	1.80	-0.12
12547.00	91.790	324.430	7202.94	4853.98	5731.76	-397.16	1747995.50	14447909.94	39°46'58.4383"N	80°37'1.4529"W	5745.51	356.036	1.82	1.71	0.63
12637.00	90.800	324.380	7200.91	4943.95	5804.93	-449.53	1747943.15	14447983.07	39°46'59.1635"N	80°37'2.1197"W	5822.31	355.572	1.10	-1.10	-0.06
12728.00	91.690	324.410	7198.93	5034.92	5878.90	-502.50	1747890.21	14448057.01	39°46'59.8968"N	80°37'2.7941"W	5900.33	355.115	0.98	0.98	0.03
12819.00	90.800	324.550	7196.95	5125.89	5952.95	-555.36	1747837.37	14448131.03	39°47'0.6308"N	80°37'3.4671"W	5978.79	354.670	0.99	-0.98	0.15
12911.00	89.880	321.030	7196.41	5217.86	6026.20	-610.98	1747781.77	14448204.26	39°47'1.3571"N	80°37'4.1756"W	6057.10	354.211	3.95	-1.00	-3.83
13002.00	91.480	323.030	7195.33	5308.81	6097.93	-666.96	1747725.81	14448275.96	39°47'2.0683"N	80°37'4.8887"W	6134.30	353.758	2.81	1.76	2.20
13091.00	88.890	322.240	7195.04	5397.78	6168.66	-720.97	1747671.82	14448346.66	39°47'2.7696"N	80°37'5.5767"W	6210.65	353.334	3.04	-2.91	-0.89
13184.00	90.220	322.550	7195.76	5490.75	6242.33	-777.72	1747615.10	14448420.31	39°47'3.5001"N	80°37'6.2995"W	6290.59	352.898	1.47	1.43	0.33
13276.00	90.650	323.130	7195.06	5582.74	6315.65	-833.29	1747559.55	14448493.59	39°47'4.2270"N	80°37'7.0073"W	6370.38	352.484	0.78	0.47	0.63
13366.00	91.230	323.420	7193.59	5672.73	6387.78	-887.10	1747505.76	14448565.69	39°47'4.9420"N	80°37'7.6927"W	6449.08	352.094	0.72	0.64	0.32
13458.00	90.620	323.040	7192.10	5764.71	6461.46	-942.16	1747450.72	14448639.35	39°47'5.6725"N	80°37'8.3940"W	6529.79	351.704	0.78	-0.66	-0.41
13551.00	91.420	323.840	7190.44	5857.69	6536.15	-997.55	1747395.35	14448714.01	39°47'6.4130"N	80°37'9.0994"W	6611.83	351.322	1.22	0.86	0.86
13642.00	90.980	324.530	7188.54	5948.67	6609.93	-1050.79	1747342.13	14448787.76	39°47'7.1443"N	80°37'9.7773"W	6692.93	350.967	0.90	-0.48	0.76
13732.00	90.060	321.590	7187.72	6038.65	6681.85	-1104.86	1747288.07	14448859.65	39°47'7.8574"N	80°37'10.4662"W	6772.58	350.611	3.42	-1.02	-3.27
13825.00	91.140	322.690	7186.75	6131.61	6755.27	-1161.94	1747231.02	14448933.04	39°47'8.5853"N	80°37'11.1932"W	6854.47	350.240	1.66	1.16	1.18
13916.00	90.150	322.740	7185.72	6222.59	6827.66	-1217.06	1747175.92	14449005.41	39°47'9.3031"N	80°37'11.8954"W	6935.29	349.893	1.09	-1.09	0.05
14006.00	90.430	322.880	7185.27	6312.58	6899.36	-1271.46	1747121.54	14449077.08	39°47'10.0139"N	80°37'12.5883"W	7015.54	349.558	0.35	0.31	0.16
14097.00	92.430	323.800	7183.00	6403.54	6972.33	-1325.77	1747067.25	14449150.02	39°47'10.7374"N	80°37'13.2801"W	7097.26	349.234	2.42	2.20	1.01
14187.00	90.030	322.340	7181.07	6493.50	7044.25	-1379.83	1747013.22	14449221.91	39°47'11.4504"N	80°37'13.9687"W	7178.12	348.917	3.12	-2.67	-1.62
14278.00	91.450	322.890	7179.89	6584.48	7116.55	-1435.08	1746957.99	14449294.18	39°47'12.1672"N	80°37'14.6724"W	7259.80	348.599	1.67	1.56	0.60
14370.00	91.200	322.960	7177.76	6676.45	7189.93	-1490.53	1746902.56	14449367.54	39°47'12.8947"N	80°37'15.3787"W	7342.80	348.288	0.28	-0.27	0.08
14460.00	91.420	323.340	7175.71	6766.42	7261.93	-1544.49	1746848.62	14449439.51	39°47'13.6085"N	80°37'16.0661"W	7424.36	347.993	0.49	0.24	0.42
14550.00	91.230	323.240	7173.62	6856.39	7334.06	-1598.27	1746794.86	14449511.61	39°47'14.3236"N	80°37'16.7511"W	7506.19	347.706	0.24	-0.21	-0.11
14641.00	90.770	323.020	7172.04	6947.37	7406.85	-1652.86	1746740.29	14449584.37	39°47'15.0452"N	80°37'17.4465"W	7589.03	347.420	0.56	-0.51	-0.24
14732.00	91.480	323.180	7170.25	7038.35	7479.61	-1707.49	1746685.68	14449657.10	39°47'15.7665"N	80°37'18.1423"W	7672.03	347.141	0.80	0.78	0.18
14823.00	91.050	323.390	7168.24	7129.33	7552.54	-1761.88	1746631.32	14449730.00	39°47'16.4895"N	80°37'18.8351"W	7755.32	346.869	0.53	-0.47	0.23
14914.00	91.050	323.470	7166.57	7220.31	7625.61	-1816.09	1746577.13	14449803.05	39°47'17.2140"N	80°37'19.5256"W	7838.88	346.604	0.09	0.00	0.09
15006.00	90.490	323.060	7165.34	7312.30	7699.33	-1871.11	1746522.13	14449876.74	39°47'17.9448"N	80°37'20.2264"W	7923.43	346.341	0.75	-0.61	-0.45

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 405H ST01
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 405H ST01 AWP
Slot	Slot 405H	Sidetrack from	Gladys Briggs MSH 405H AWP Proj: 1112' at 800.00 MD

WELLPATH DATA (201 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]
15096.00	91.230	323.290	7163.99	7402.28	7771.37	-1925.05	1746468.21	14449948.74	39°47'18.6589"N	80°37'20.9135"W	8006.24	346.087	0.86	0.82	0.26
15189.00	90.950	323.260	7162.22	7495.26	7845.89	-1980.65	1746412.63	14450023.24	39°47'19.3978"N	80°37'21.6217"W	8092.03	345.832	0.30	-0.30	-0.03
15280.00	90.680	322.900	7160.92	7586.25	7918.64	-2035.31	1746358.00	14450095.96	39°47'20.1190"N	80°37'22.3179"W	8176.02	345.585	0.49	-0.30	-0.40
15370.00	90.770	323.300	7159.78	7676.24	7990.60	-2089.34	1746303.98	14450167.90	39°47'20.8324"N	80°37'23.0062"W	8259.24	345.347	0.46	0.10	0.44
15461.00	90.890	323.470	7158.47	7767.23	8063.64	-2143.61	1746249.73	14450240.90	39°47'21.5565"N	80°37'23.6975"W	8343.70	345.113	0.23	0.13	0.19
15551.00	90.550	322.780	7157.33	7857.21	8135.63	-2197.61	1746195.75	14450312.86	39°47'22.2701"N	80°37'24.3854"W	8427.21	344.884	0.85	-0.38	-0.77
15643.00	90.680	323.580	7156.35	7949.20	8209.27	-2252.74	1746140.64	14450386.48	39°47'23.0002"N	80°37'25.0877"W	8512.75	344.655	0.88	0.14	0.87
15733.00	90.310	322.710	7155.57	8039.20	8281.28	-2306.72	1746086.68	14450458.46	39°47'23.7141"N	80°37'25.7753"W	8596.54	344.435	1.05	-0.41	-0.97
15825.00	90.920	323.210	7154.58	8131.18	8354.71	-2362.14	1746031.29	14450531.86	39°47'24.4421"N	80°37'26.4812"W	8682.22	344.213	0.86	0.66	0.54
15916.00	90.830	323.190	7153.19	8222.17	8427.57	-2416.64	1745976.81	14450604.69	39°47'25.1644"N	80°37'27.1755"W	8767.22	344.000	0.10	-0.10	-0.02
16007.00	90.770	323.170	7151.92	8313.16	8500.41	-2471.17	1745922.30	14450677.51	39°47'25.8865"N	80°37'27.8702"W	8852.32	343.790	0.07	-0.07	-0.02
16097.00	90.250	323.230	7151.12	8403.15	8572.47	-2525.08	1745868.41	14450749.54	39°47'26.6009"N	80°37'28.5569"W	8936.63	343.587	0.58	-0.58	0.07
16188.00	90.490	322.380	7150.53	8494.14	8644.96	-2580.09	1745813.42	14450822.00	39°47'27.3195"N	80°37'29.2578"W	9021.76	343.382	0.97	0.26	-0.93
16278.00	90.400	323.140	7149.83	8584.12	8716.61	-2634.55	1745758.98	14450893.62	39°47'28.0299"N	80°37'29.9516"W	9106.05	343.183	0.85	-0.10	0.84
16369.00	90.620	323.290	7149.02	8675.11	8789.48	-2689.04	1745704.51	14450966.47	39°47'28.7523"N	80°37'30.6457"W	9191.63	342.989	0.29	0.24	0.16
16459.00	90.150	322.410	7148.42	8765.10	8861.22	-2743.39	1745650.18	14451038.17	39°47'29.4635"N	80°37'31.3381"W	9276.17	342.798	1.11	-0.52	-0.98
16550.00	92.650	323.400	7146.20	8856.06	8933.77	-2798.26	1745595.34	14451110.70	39°47'30.1828"N	80°37'32.0371"W	9361.76	342.608	2.95	2.75	1.09
16642.00	89.820	323.570	7144.21	8948.03	9007.69	-2852.98	1745540.64	14451184.59	39°47'30.9155"N	80°37'32.7342"W	9448.70	342.426	3.08	-3.08	0.18
16732.00	90.030	323.110	7144.33	9038.02	9079.89	-2906.72	1745486.92	14451256.76	39°47'31.6313"N	80°37'33.4187"W	9533.80	342.249	0.56	0.23	-0.51
16822.00	91.020	323.140	7143.51	9128.01	9151.88	-2960.72	1745432.94	14451328.72	39°47'32.3449"N	80°37'34.1067"W	9618.87	342.073	1.10	1.10	0.03
16854.00‡	91.020	323.140	7142.94	9160.01	9177.48	-2979.91	1745413.75	14451354.31	39°47'32.5987"N	80°37'34.3512"W	9649.14	342.011	0.00	0.00	0.00

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 405H ST01
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 405H ST01 AWB
Slot	Slot 405H	Sidetrack from	Gladys Briggs MSH 405H AWP Proj: 1112' at 800.00 MD

HOLE & CASING SECTIONS - Ref Wellbore: Gladys Briggs MSH 405H ST01 AWB Ref Wellpath: Gladys Briggs MSH 405H ST01 AWP Proj: 16854'

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	126.00	100.00	26.00	126.00	0.00	0.00	-0.06	-0.02
17.5in Open Hole	126.00	800.00	674.00	126.00	799.99	-0.06	-0.02	-2.32	2.30
13.375in Casing Surface	26.00	800.00	774.00	26.00	799.99	0.00	0.00	-2.32	2.30
12.25in Open Hole	800.00	2707.00	1907.00	799.99	2586.72	-2.32	2.30	338.35	482.03
9.625in Casing Intermediate	800.00	2707.00	1907.00	799.99	2586.72	-2.32	2.30	338.35	482.03
8.75in Open Hole	2707.00	5850.00	3143.00	2586.72	5365.37	338.35	482.03	1141.48	1709.71
8.5in Open Hole	5850.00	16854.00	11004.00	5365.37	7142.94	1141.48	1709.71	9177.48	-2979.91
5.5in Casing Production	800.00	16854.00	16054.00	799.99	7142.94	-2.32	2.30	9177.48	-2979.91

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Gladys Briggs MSH 405H BHL Rev-5	7122.00	9186.77	-2967.42	1745426.24	14451363.60	39°47'32.6901"N	80°37'34.1907"W	point
Gladys Briggs MSH 405H LP Rev-4	7145.00	2230.79	2143.82	1750535.50	14444410.32	39°46'23.7309"N	80°36'29.1016"W	point

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 405H ST01
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 405H ST01 AWB
Slot	Slot 405H	Sidetrack from	Gladys Briggs MSH 405H AWP Proj: 1112' at 800.00 MD

WELLPATH COMPOSITION - Ref Wellbore: Gladys Briggs MSH 405H ST01 AWB Ref Wellpath: Gladys Briggs MSH 405H ST01 AWP Proj: 16854'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	800.00	Gyrodata 2015 - GC+WIR+DPIPE	03 Gyrodata relog <17-1/2"> (100'-800')	Gladys Briggs MSH 405H AWB	5/13/2021
800.00	1020.00	Gyrodata 2015 - GC+WIR+DPIPE	05 Gyrodata <12-1/4"> (900'-1020')	Gladys Briggs MSH 405H ST01 AWB	5/21/2021
1020.00	2642.00	OWSG MWD rev2 + HRGM	06 Premier MWD <12-1/4"> (1051'-2642')	Gladys Briggs MSH 405H ST01 AWB	5/21/2021
2642.00	5786.00	OWSG MWD rev2 + HRGM	07 Premier MWD <8-3/4"> (2729'-5786')	Gladys Briggs MSH 405H ST01 AWB	5/21/2021
5786.00	16854.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	08_BH AT Curve <8-1/2"> (5892'-16822')	Gladys Briggs MSH 405H ST01 AWB	5/21/2021

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 405H ST01
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 405H ST01 AWB
Slot	Slot 405H	Sidetrack from	Gladys Briggs MSH 405H AWP Proj: 1112' at 800.00 MD

COMMENTS
<p>Wellpath general comments API: 47-051-02371-0100 BH Job #: 110870191 Rig: SDC 41 Duration: 05/24/2021 - 05/26/2021</p>