

SWN PRODUCTION COMPANY, LLC

Location: Marshall County, WV
 Field: Marshall
 Facility: Gladys Briggs MSH Pad

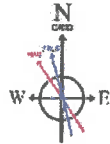
Slot: Slot 3H
 Well: Gladys Briggs MSH 3H
 Wellbore: Gladys Briggs MSH 3H PWB



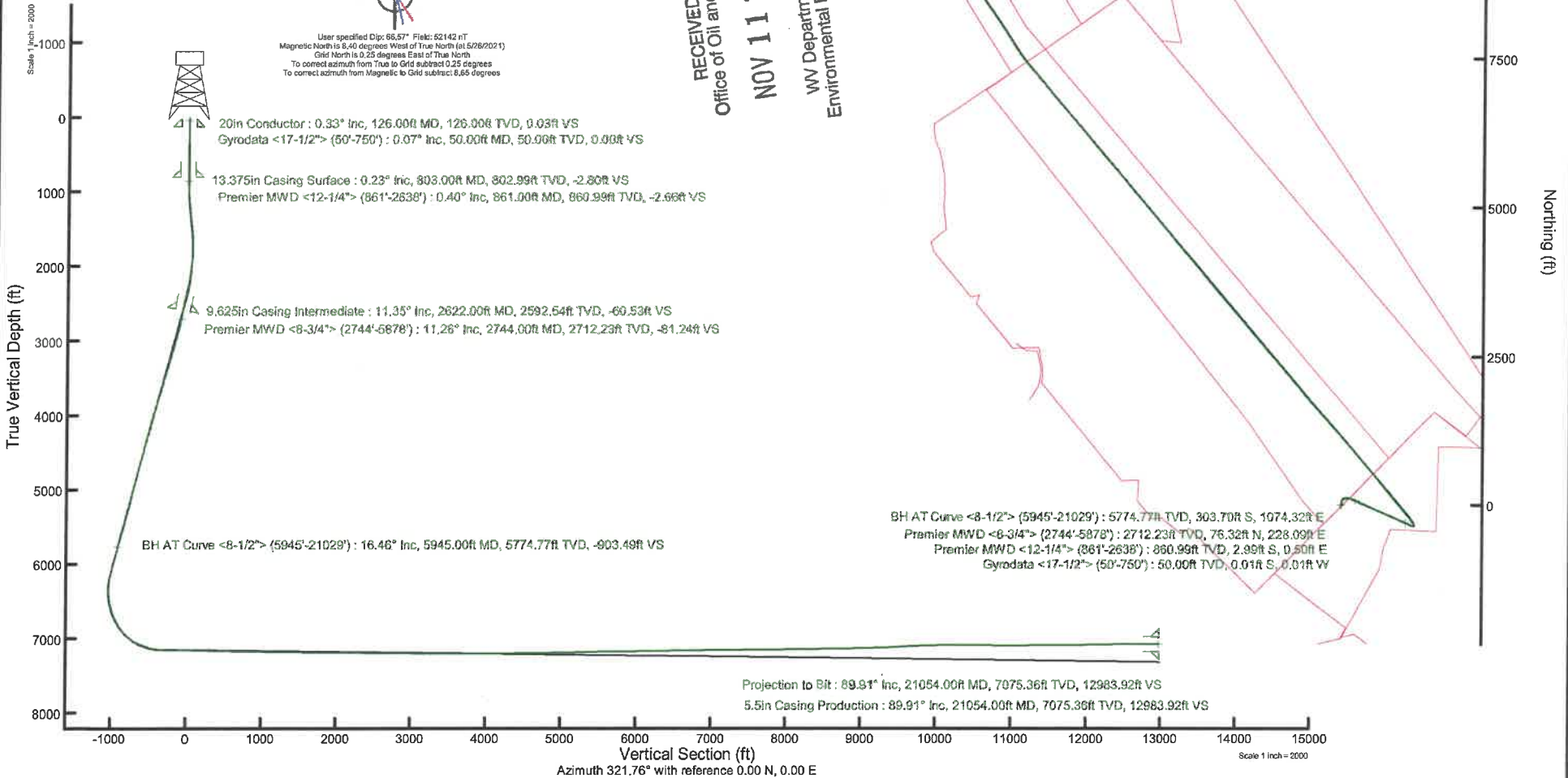
Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Gladys Briggs MSH Pad		1748342.310	14442131.690	39°46'1.2972"N	80°36'57.3284"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot 3H	43.59	16.11	1748358.410	14442175.260	39°46'1.7273"N
SDC 41 (KB) to Mud line (At Slot: Slot 3H)				26ft	
Mean Sea Level to Mud line (At Slot: Slot 3H)				-1382.8ft	
SDC 41 (KB) to Mean Sea Level				1408.8ft	

Plot reference wellpath is Gladys Briggs MSH 3H PWB Rev A.D	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC 41 (KB)	North Reference: Grid north
Reference wellpath measured depths are referenced to SDC 41 (KB)	Scale: True distance
SDC 41 (KB) to Mean Sea Level: 1408.8 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Mud line (At Slot: Slot 3H): -1382.8 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: stjerjen on 2021-06-07; Database: WA_MPL_EASTERNUS_Defn

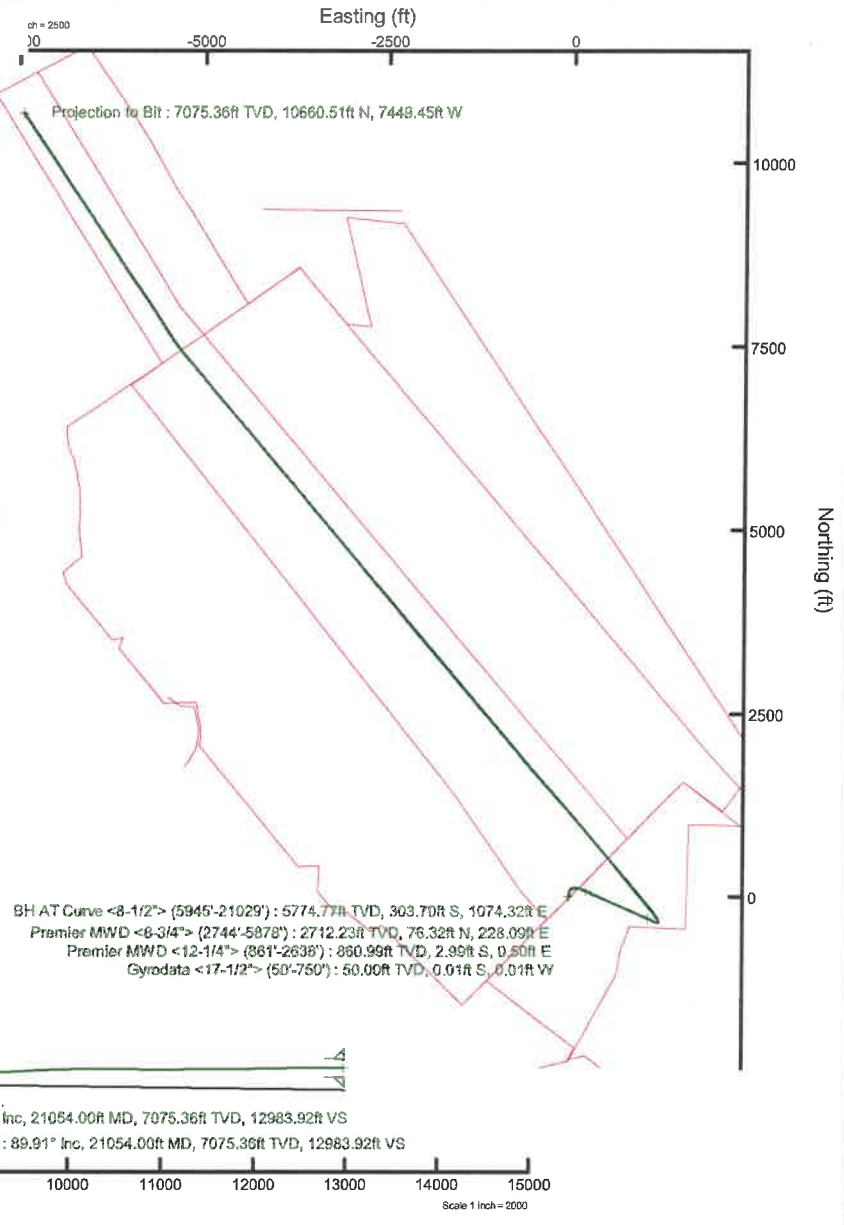
API: 47-051-02369-0000
 BH Job #: 110870177
 Rig: SDC 41
 Duration: 06/04/2021 - 06/06/2021



User specified Dip: 66.57° Field: 52142 nT
 Magnetic North is 8.40 degrees West of True North (at 6/26/2021)
 Grid North is 0.25 degrees East of True North
 To correct azimuth from True to Grid subtract 0.25 degrees
 To correct azimuth from Magnetic to Grid subtract: 8.65 degrees



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Gladys Briggs MSH 3H AWP Proj: 21054'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 3H
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 3H AWB
Slot	Slot 3H		

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	6/7/2021 at 3:06:19 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	43.59	16.11	1748358.41	14442175.26	39°46'1.7273"N	80°36'57.1178"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	1408.80ft
Horizontal Reference Pt	Slot	SDC 41 (KB) to Mean Sea Level	1408.80ft
Vertical Reference Pt	SDC 41 (KB)	SDC 41 (KB) to Mud Line at Slot (Slot 3H)	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	321.76°



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Slot	Slot 3H		

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WELLPATH DATA (256 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	234.580	0.00	0.00	0.00	0.00	1748358.41	14442175.26	39°46'1.7273"N	80°36'57.1178"W	0.00	0.000	0.00	0.00	0.00	
26.00	0.000	234.580	26.00	0.00	0.00	0.00	1748358.41	14442175.26	39°46'1.7273"N	80°36'57.1178"W	0.00	0.000	0.00	0.00	0.00	
50.00	0.070	234.580	50.00	0.00	-0.01	-0.01	1748358.40	14442175.25	39°46'1.7272"N	80°36'57.1179"W	0.01	234.580	0.29	0.29	0.00	
75.00	0.280	232.350	75.00	0.00	-0.05	-0.07	1748358.34	14442175.21	39°46'1.7267"N	80°36'57.1187"W	0.09	233.083	0.84	0.84	-8.92	
100.00	0.260	242.330	100.00	0.01	-0.12	-0.17	1748358.24	14442175.14	39°46'1.7261"N	80°36'57.1200"W	0.21	235.377	0.20	-0.08	39.92	
125.00	0.330	235.930	125.00	0.03	-0.18	-0.28	1748358.13	14442175.08	39°46'1.7254"N	80°36'57.1214"W	0.34	236.664	0.31	0.28	-25.60	
150.00	0.220	220.800	150.00	0.02	-0.26	-0.37	1748358.04	14442175.00	39°46'1.7247"N	80°36'57.1225"W	0.45	234.895	0.52	-0.44	-60.52	
175.00	0.280	210.790	175.00	-0.01	-0.35	-0.43	1748357.98	14442174.91	39°46'1.7238"N	80°36'57.1233"W	0.56	231.134	0.30	0.24	-40.04	
200.00	0.220	205.070	200.00	-0.05	-0.45	-0.49	1748357.92	14442174.81	39°46'1.7229"N	80°36'57.1240"W	0.66	227.459	0.26	-0.24	-22.88	
225.00	0.230	181.960	225.00	-0.11	-0.54	-0.51	1748357.90	14442174.72	39°46'1.7219"N	80°36'57.1243"W	0.74	223.279	0.36	0.04	-92.44	
250.00	0.330	159.210	250.00	-0.22	-0.66	-0.48	1748357.93	14442174.60	39°46'1.7208"N	80°36'57.1240"W	0.82	216.397	0.59	0.40	-91.00	
275.00	0.320	123.510	275.00	-0.35	-0.76	-0.40	1748358.01	14442174.50	39°46'1.7197"N	80°36'57.1229"W	0.86	207.709	0.80	-0.04	-142.80	
300.00	0.440	132.140	300.00	-0.51	-0.87	-0.27	1748358.14	14442174.39	39°46'1.7187"N	80°36'57.1213"W	0.91	197.403	0.53	0.48	34.52	
325.00	0.530	129.410	325.00	-0.72	-1.00	-0.11	1748358.30	14442174.26	39°46'1.7173"N	80°36'57.1192"W	1.01	186.309	0.37	0.36	-10.92	
350.00	0.410	132.910	350.00	-0.92	-1.14	0.04	1748358.45	14442174.12	39°46'1.7160"N	80°36'57.1173"W	1.14	177.795	0.49	-0.48	14.00	
375.00	0.380	119.850	374.99	-1.09	-1.24	0.18	1748358.59	14442174.02	39°46'1.7150"N	80°36'57.1155"W	1.25	171.688	0.38	-0.12	-52.24	
400.00	0.360	129.270	399.99	-1.24	-1.33	0.31	1748358.72	14442173.93	39°46'1.7141"N	80°36'57.1138"W	1.37	166.733	0.26	-0.08	37.68	
425.00	0.320	115.800	424.99	-1.38	-1.41	0.44	1748358.85	14442173.85	39°46'1.7133"N	80°36'57.1122"W	1.48	162.777	0.36	-0.16	-53.88	
450.00	0.430	117.420	449.99	-1.53	-1.49	0.58	1748358.99	14442173.78	39°46'1.7125"N	80°36'57.1104"W	1.60	158.544	0.44	0.44	6.48	
475.00	0.300	120.840	474.99	-1.67	-1.56	0.72	1748359.13	14442173.70	39°46'1.7118"N	80°36'57.1086"W	1.72	155.156	0.53	-0.52	13.68	
500.00	0.230	137.410	499.99	-1.79	-1.63	0.81	1748359.22	14442173.63	39°46'1.7111"N	80°36'57.1074"W	1.82	153.516	0.41	-0.28	66.28	
525.00	0.150	149.360	524.99	-1.87	-1.70	0.86	1748359.27	14442173.56	39°46'1.7104"N	80°36'57.1068"W	1.90	153.026	0.36	-0.32	47.80	
550.00	0.170	195.080	549.99	-1.92	-1.76	0.87	1748359.28	14442173.50	39°46'1.7098"N	80°36'57.1067"W	1.97	153.689	0.50	0.08	182.88	
575.00	0.150	180.150	574.99	-1.97	-1.83	0.86	1748359.27	14442173.43	39°46'1.7091"N	80°36'57.1068"W	2.02	154.797	0.18	-0.08	-59.72	
600.00	0.230	192.990	599.99	-2.03	-1.91	0.85	1748359.26	14442173.35	39°46'1.7083"N	80°36'57.1070"W	2.09	156.031	0.36	0.32	51.36	
625.00	0.180	191.900	624.99	-2.08	-2.00	0.83	1748359.24	14442173.26	39°46'1.7075"N	80°36'57.1072"W	2.16	157.438	0.20	-0.20	-4.36	
650.00	0.240	207.640	649.99	-2.13	-2.08	0.80	1748359.21	14442173.18	39°46'1.7066"N	80°36'57.1076"W	2.23	159.042	0.33	0.24	62.96	
675.00	0.300	183.790	674.99	-2.20	-2.20	0.77	1748359.18	14442173.07	39°46'1.7055"N	80°36'57.1080"W	2.33	160.684	0.50	0.24	-95.40	
700.00	0.220	190.170	699.99	-2.28	-2.31	0.76	1748359.17	14442172.95	39°46'1.7044"N	80°36'57.1082"W	2.43	161.847	0.34	-0.32	25.52	
725.00	0.380	181.930	724.99	-2.38	-2.44	0.75	1748359.16	14442172.82	39°46'1.7031"N	80°36'57.1083"W	2.55	162.999	0.66	0.64	-32.96	



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Slot	Slot 3H		

WELLPATH DATA (256 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]
750.00	0.530	169.390	749.99	-2.54	-2.63	0.76	1748359.17	14442172.63	39°46'1.7012"N	80°36'57.1081"W	2.74	163.830	0.72	0.60	-50.16
861.00	0.400	293.280	860.99	-2.66	-2.99	0.50	1748358.91	14442172.28	39°46'1.6977"N	80°36'57.1115"W	3.03	170.447	0.74	-0.12	111.61
949.00	2.170	342.220	948.96	-0.83	-1.28	-0.29	1748358.12	14442173.98	39°46'1.7146"N	80°36'57.1215"W	1.31	192.716	2.19	2.01	55.61
1039.00	4.460	349.470	1038.81	3.87	3.79	-1.45	1748356.96	14442179.04	39°46'1.7647"N	80°36'57.1361"W	4.05	339.062	2.58	2.54	8.06
1127.00	6.170	0.340	1126.43	10.60	11.88	-2.05	1748356.37	14442187.13	39°46'1.8447"N	80°36'57.1433"W	12.05	350.229	2.25	1.94	12.35
1220.00	8.240	3.920	1218.69	19.44	23.53	-1.56	1748356.85	14442198.78	39°46'1.9598"N	80°36'57.1364"W	23.58	356.206	2.28	2.23	3.85
1312.00	10.160	8.820	1309.50	29.86	38.12	0.13	1748358.54	14442213.37	39°46'2.1040"N	80°36'57.1139"W	38.12	0.202	2.25	2.09	5.33
1400.00	10.840	15.990	1396.03	39.99	53.75	3.60	1748362.01	14442228.99	39°46'2.2583"N	80°36'57.0686"W	53.87	3.837	1.67	0.77	8.15
1491.00	11.610	22.660	1485.30	49.44	70.43	9.49	1748367.90	14442245.66	39°46'2.4228"N	80°36'56.9924"W	71.06	7.674	1.66	0.85	7.33
1583.00	11.840	29.190	1575.38	57.57	87.21	17.66	1748376.06	14442262.44	39°46'2.5884"N	80°36'56.8868"W	88.98	11.447	1.46	0.25	7.10
1674.00	11.430	40.460	1664.52	62.92	102.22	28.07	1748386.46	14442277.44	39°46'2.7363"N	80°36'56.7527"W	106.01	15.352	2.53	-0.45	12.38
1763.00	10.880	52.070	1751.85	64.60	114.10	40.41	1748398.81	14442289.31	39°46'2.8531"N	80°36'56.5939"W	121.04	19.505	2.59	-0.62	13.04
1852.00	10.060	73.380	1839.40	61.69	121.49	54.49	1748412.88	14442296.70	39°46'2.9255"N	80°36'56.4132"W	133.15	24.159	4.42	-0.92	23.94
1945.00	10.620	84.600	1930.90	54.05	124.62	70.81	1748429.19	14442299.83	39°46'2.9558"N	80°36'56.2041"W	143.33	29.607	2.24	0.60	12.06
2035.00	10.980	89.540	2019.31	44.30	125.47	87.64	1748446.01	14442300.68	39°46'2.9635"N	80°36'55.9885"W	153.04	34.934	1.10	0.40	5.49
2127.00	10.840	101.760	2109.66	32.30	123.77	104.87	1748463.24	14442298.98	39°46'2.9460"N	80°36'55.7680"W	162.23	40.274	2.51	-0.15	13.28
2220.00	11.720	108.230	2200.86	17.73	119.04	122.41	1748480.77	14442294.25	39°46'2.8984"N	80°36'55.5437"W	170.74	45.800	1.66	0.95	6.96
2309.00	13.630	111.130	2287.69	1.17	112.43	140.77	1748499.13	14442287.64	39°46'2.8323"N	80°36'55.3088"W	180.16	51.388	2.26	2.15	3.26
2401.00	13.710	111.970	2377.08	-17.62	104.44	161.00	1748519.34	14442279.66	39°46'2.7526"N	80°36'55.0503"W	191.90	57.028	0.23	0.09	0.91
2493.00	13.290	112.680	2466.54	-36.32	96.28	180.86	1748539.20	14442271.51	39°46'2.6711"N	80°36'54.7963"W	204.90	61.971	0.49	-0.46	0.77
2581.00	12.070	113.090	2552.39	-53.24	88.78	198.66	1748556.99	14442264.00	39°46'2.5962"N	80°36'54.5688"W	217.59	65.922	1.39	-1.39	0.47
2638.00	11.070	112.930	2608.24	-63.26	84.31	209.18	1748567.51	14442259.53	39°46'2.5515"N	80°36'54.4343"W	225.53	68.049	1.76	-1.75	-0.28
2744.00	11.260	112.870	2712.23	-81.24	76.32	228.09	1748586.41	14442251.55	39°46'2.4718"N	80°36'54.1926"W	240.52	71.500	0.18	0.18	-0.06
2789.00	11.410	111.980	2756.35	-88.95	72.95	236.27	1748594.58	14442248.18	39°46'2.4381"N	80°36'54.0881"W	247.27	72.842	0.51	0.33	-1.98
2881.00	15.350	115.410	2845.84	-107.76	64.31	255.71	1748614.02	14442239.55	39°46'2.3520"N	80°36'53.8395"W	263.67	75.883	4.37	4.28	3.73
2973.00	17.150	113.180	2934.16	-130.59	53.75	279.18	1748637.48	14442228.98	39°46'2.2466"N	80°36'53.5396"W	284.31	79.103	2.07	1.96	-2.42
3065.00	17.150	111.040	3022.07	-154.16	43.54	304.31	1748662.60	14442218.78	39°46'2.1446"N	80°36'53.2183"W	307.41	81.858	0.69	0.00	-2.33
3156.00	17.890	113.620	3108.85	-178.02	33.12	329.64	1748687.92	14442208.37	39°46'2.0406"N	80°36'52.8945"W	331.30	84.263	1.18	0.81	2.84
3248.00	16.460	116.890	3196.75	-202.31	21.56	354.21	1748712.49	14442196.81	39°46'1.9253"N	80°36'52.5805"W	354.87	86.517	1.87	-1.55	3.55
3339.00	17.950	115.640	3283.67	-226.60	9.66	378.36	1748736.62	14442184.92	39°46'1.8067"N	80°36'52.2720"W	378.48	88.537	1.69	1.64	-1.37



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Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 3H AWB
Slot	Slot 3H		

WELLPATH DATA (256 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]
3431.00	18.630	113.890	3371.03	-252.32	-2.42	404.57	1748762.82	14442172.84	39°46'1.6861"N	80°36'51.9369"W	404.58	90.343	0.95	0.74	-1.90
3522.00	18.230	113.430	3457.36	-277.69	-13.97	430.92	1748789.16	14442161.30	39°46'1.5709"N	80°36'51.6001"W	431.15	91.857	0.47	-0.44	-0.51
3612.00	18.040	114.110	3542.89	-302.43	-25.26	456.56	1748814.79	14442150.01	39°46'1.4582"N	80°36'51.2724"W	457.26	93.167	0.32	-0.21	0.76
3703.00	18.050	115.930	3629.41	-327.60	-37.18	482.10	1748840.32	14442138.09	39°46'1.3393"N	80°36'50.9460"W	483.53	94.410	0.62	0.01	2.00
3794.00	18.510	116.380	3715.82	-353.34	-49.76	507.72	1748865.93	14442125.52	39°46'1.2139"N	80°36'50.6186"W	510.15	95.598	0.53	0.51	0.49
3886.00	18.650	115.090	3803.02	-379.68	-62.49	534.12	1748892.33	14442112.79	39°46'1.0870"N	80°36'50.2811"W	537.77	96.673	0.47	0.15	-1.40
3976.00	18.630	115.230	3888.30	-405.40	-74.72	560.16	1748918.35	14442100.57	39°46'0.9650"N	80°36'49.9484"W	565.12	97.598	0.05	-0.02	0.16
4066.00	17.840	115.510	3973.78	-430.63	-86.78	585.61	1748943.79	14442088.51	39°46'0.8447"N	80°36'49.6232"W	592.00	98.430	0.88	-0.88	0.31
4157.00	16.990	113.380	4060.61	-454.83	-98.06	610.39	1748968.57	14442077.23	39°46'0.7322"N	80°36'49.3064"W	618.22	99.127	1.17	-0.93	-2.34
4245.00	16.970	112.020	4144.78	-477.29	-107.98	634.10	1748992.26	14442067.32	39°46'0.6332"N	80°36'49.0034"W	643.23	99.664	0.45	-0.02	-1.55
4335.00	16.460	114.600	4230.97	-500.04	-118.21	657.87	1749016.02	14442057.09	39°46'0.5310"N	80°36'48.6995"W	668.41	100.187	1.00	-0.57	2.87
4425.00	15.640	115.490	4317.47	-522.26	-128.74	680.41	1749038.56	14442046.57	39°46'0.4260"N	80°36'48.4114"W	692.49	100.714	0.95	-0.91	0.99
4515.00	15.550	113.970	4404.15	-543.82	-138.86	702.39	1749060.52	14442036.45	39°46'0.3250"N	80°36'48.1306"W	715.98	101.183	0.46	-0.10	-1.69
4607.00	15.830	114.940	4492.73	-565.92	-149.17	725.03	1749083.16	14442026.15	39°46'0.2223"N	80°36'47.8411"W	740.22	101.626	0.42	0.30	1.05
4699.00	16.330	114.430	4581.13	-588.61	-159.81	748.19	1749106.31	14442015.52	39°46'0.1161"N	80°36'47.5452"W	765.06	102.057	0.56	0.54	-0.55
4786.00	16.050	116.830	4664.68	-610.38	-170.29	770.06	1749128.17	14442005.03	39°46'0.0116"N	80°36'47.2657"W	788.66	102.470	0.83	-0.32	2.76
4876.00	16.020	119.090	4751.18	-633.13	-181.95	792.01	1749150.11	14441993.38	39°45'59.8955"N	80°36'46.9852"W	812.64	102.938	0.69	-0.03	2.51
4969.00	16.540	115.780	4840.45	-656.87	-193.94	815.15	1749173.24	14441981.39	39°45'59.7759"N	80°36'46.6896"W	837.90	103.383	1.14	0.56	-3.56
5059.00	17.710	113.090	4926.46	-680.40	-204.88	839.27	1749197.36	14441970.46	39°45'59.6668"N	80°36'46.3812"W	863.92	103.719	1.57	1.30	-2.99
5150.00	16.170	108.460	5013.51	-703.13	-214.32	864.03	1749222.10	14441961.02	39°45'59.5724"N	80°36'46.0648"W	890.21	103.931	2.25	-1.69	-5.09
5242.00	15.050	110.440	5102.12	-724.04	-222.55	887.37	1749245.44	14441952.79	39°45'59.4901"N	80°36'45.7663"W	914.86	104.079	1.35	-1.22	2.15
5334.00	15.850	115.180	5190.79	-745.49	-232.07	909.94	1749267.99	14441943.28	39°45'59.3951"N	80°36'45.4778"W	939.06	104.308	1.62	0.87	5.15
5425.00	16.730	116.140	5278.14	-768.41	-243.13	932.94	1749290.99	14441932.23	39°45'59.2848"N	80°36'45.1839"W	964.10	104.607	1.01	0.97	1.05
5515.00	16.930	111.510	5364.29	-791.41	-253.64	956.76	1749314.80	14441921.72	39°45'59.1799"N	80°36'44.8794"W	989.81	104.848	1.51	0.22	-5.14
5605.00	17.180	108.730	5450.33	-813.87	-262.71	981.54	1749339.57	14441912.65	39°45'59.0892"N	80°36'44.5626"W	1016.09	104.984	0.95	0.28	-3.09
5696.00	17.480	109.020	5537.20	-836.64	-271.48	1007.19	1749365.21	14441903.88	39°45'59.0014"N	80°36'44.2346"W	1043.14	105.085	0.34	0.33	0.32
5787.00	17.680	114.850	5623.96	-860.46	-281.74	1032.65	1749390.66	14441893.62	39°45'58.9899"N	80°36'43.9091"W	1070.40	105.261	1.95	0.22	6.41
5878.00	17.540	119.450	5710.70	-885.47	-294.29	1057.13	1749415.13	14441881.08	39°45'58.7738"N	80°36'43.5963"W	1097.33	105.557	1.54	-0.15	5.05
5945.00	16.460	117.890	5774.77	-903.49	-303.70	1074.32	1749432.31	14441871.68	39°45'58.6802"N	80°36'43.3768"W	1116.42	105.785	1.75	-1.61	-2.33
6038.00	16.930	115.740	5863.85	-927.71	-315.74	1098.16	1749456.14	14441859.64	39°45'58.5601"N	80°36'43.0721"W	1142.65	106.041	0.83	0.51	-2.31



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Slot	Slot 3H		

WELLPATH DATA (256 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]
6129.00	16.980	115.140	5950.90	-951.49	-327.14	1122.12	1749480.10	14441848.25	39°45'58.4464"N	80°36'42.7659"W	1168.84	106.253	0.20	0.05	-0.66
6217.00	16.730	113.100	6035.12	-974.09	-337.57	1145.41	1749503.37	14441837.82	39°45'58.3424"N	80°36'42.4683"W	1194.11	106.421	0.73	-0.28	-2.32
6308.00	16.210	113.390	6122.38	-996.76	-347.75	1169.11	1749527.07	14441827.64	39°45'58.2407"N	80°36'42.1653"W	1219.73	106.565	0.58	-0.57	0.32
6396.00	11.970	105.420	6207.72	-1014.93	-355.06	1189.19	1749547.14	14441820.34	39°45'58.1677"N	80°36'41.9085"W	1241.07	106.624	5.29	-4.82	-9.06
6486.00	6.760	88.530	6296.51	-1025.63	-357.41	1203.50	1749561.44	14441817.99	39°45'58.1438"N	80°36'41.7255"W	1255.45	106.540	6.49	-5.79	-18.77
6577.00	8.360	37.750	6386.81	-1027.24	-352.03	1212.91	1749570.85	14441823.36	39°45'58.1966"N	80°36'41.6046"W	1262.97	106.185	7.28	1.76	-55.80
6666.00	8.330	351.470	6474.96	-1020.06	-340.53	1215.92	1749573.86	14441834.86	39°45'58.3101"N	80°36'41.5654"W	1262.70	105.645	7.35	-0.03	-52.00
6759.00	15.890	344.830	6565.83	-1002.47	-321.55	1211.58	1749569.52	14441853.83	39°45'58.4979"N	80°36'41.6199"W	1253.53	104.863	8.25	8.13	-7.14
6850.00	20.540	325.510	6652.33	-975.04	-296.33	1199.27	1749557.21	14441879.04	39°45'58.7476"N	80°36'41.7763"W	1235.33	103.879	8.31	5.11	-21.23
6942.00	24.850	322.130	6737.19	-939.59	-267.75	1178.25	1749536.20	14441907.61	39°45'59.0309"N	80°36'42.0438"W	1208.29	102.803	4.89	4.68	-3.67
7033.00	29.960	318.410	6817.95	-897.75	-235.64	1151.41	1749509.37	14441939.71	39°45'59.3494"N	80°36'42.3858"W	1175.27	101.566	5.92	5.62	-4.09
7125.00	37.410	320.360	6894.45	-846.81	-196.88	1118.28	1749476.26	14441978.45	39°45'59.7339"N	80°36'42.8078"W	1135.48	99.985	8.18	8.10	2.12
7217.00	46.490	320.040	6962.81	-785.39	-149.69	1078.95	1749436.94	14442025.62	39°46'0.2019"N	80°36'43.3089"W	1089.28	97.899	9.87	9.87	-0.35
7308.00	54.940	320.000	7020.37	-715.06	-95.77	1033.73	1749391.74	14442079.52	39°46'0.7367"N	80°36'43.8850"W	1038.16	95.293	9.29	9.29	-0.04
7399.00	65.760	319.640	7065.32	-636.13	-35.45	982.77	1749340.80	14442139.83	39°46'1.3351"N	80°36'44.5342"W	983.41	92.066	11.90	11.89	-0.40
7489.00	68.280	318.620	7100.46	-553.37	27.20	928.55	1749286.60	14442202.45	39°46'1.9565"N	80°36'45.2251"W	928.95	88.322	2.99	2.80	-1.13
7580.00	74.930	320.080	7129.16	-467.15	92.69	872.35	1749230.42	14442267.91	39°46'2.6061"N	80°36'45.9412"W	877.26	83.935	7.46	7.31	1.60
7671.00	82.540	321.260	7146.92	-377.99	161.68	815.84	1749173.93	14442336.87	39°46'3.2903"N	80°36'46.6611"W	831.71	78.791	8.46	8.36	1.30
7763.00	89.110	321.750	7153.62	-286.28	233.45	758.76	1749116.87	14442408.62	39°46'4.0021"N	80°36'47.3881"W	793.86	72.898	7.16	7.14	0.53
7853.00	88.920	321.630	7155.17	-196.29	304.06	702.98	1749061.11	14442479.20	39°46'4.7023"N	80°36'48.0986"W	765.92	66.610	0.25	-0.21	-0.13
7943.00	89.230	322.050	7156.62	-106.31	374.82	647.38	1749005.53	14442549.93	39°46'5.4039"N	80°36'48.8067"W	748.05	59.930	0.58	0.34	0.47
8034.00	88.830	322.160	7158.16	-15.32	446.62	591.49	1748949.67	14442621.70	39°46'6.1159"N	80°36'49.5184"W	741.17	52.945	0.46	-0.44	0.12
8122.00	88.830	319.150	7159.96	72.63	514.65	535.72	1748893.92	14442689.71	39°46'6.7906"N	80°36'50.2289"W	742.87	46.149	3.42	0.00	-3.42
8212.00	87.600	319.490	7162.76	162.51	582.87	477.08	1748835.31	14442757.90	39°46'7.4673"N	80°36'50.9760"W	753.22	39.301	1.42	-1.37	0.38
8302.00	88.680	319.520	7165.68	252.39	651.27	418.67	1748776.92	14442826.28	39°46'8.1458"N	80°36'51.7203"W	774.23	32.735	1.20	1.20	0.03
8393.00	88.490	319.630	7167.93	343.29	720.53	359.68	1748717.95	14442895.51	39°46'8.8327"N	80°36'52.4720"W	805.31	26.528	0.24	-0.21	0.12
8484.00	89.020	319.380	7169.91	434.20	789.71	300.60	1748658.89	14442964.66	39°46'9.5189"N	80°36'53.2248"W	844.99	20.839	0.64	0.58	-0.27
8576.00	88.800	320.490	7171.66	526.14	860.11	241.39	1748599.71	14443035.03	39°46'10.2171"N	80°36'53.9791"W	893.34	15.677	1.23	-0.24	1.21
8663.00	88.460	318.870	7173.74	613.05	926.42	185.12	1748543.46	14443101.32	39°46'10.8748"N	80°36'54.6961"W	944.73	11.300	1.90	-0.39	-1.86
8753.00	89.630	319.120	7175.24	702.93	994.33	126.08	1748484.44	14443169.20	39°46'11.5485"N	80°36'55.4485"W	1002.29	7.226	1.33	1.30	0.28



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Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 3H AWB
Slot	Slot 3H		

WELLPATH DATA (256 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]
8846.00	89.660	319.460	7175.81	795.84	1064.82	65.42	1748423.80	14443239.67	39°46'12.2477"N	80°36'56.2215"W	1066.83	3.516	0.37	0.03	0.37
8937.00	89.480	321.050	7176.49	886.81	1134.79	7.24	1748365.65	14443309.60	39°46'12.9416"N	80°36'56.9627"W	1134.81	0.366	1.76	-0.20	1.75
9027.00	88.240	317.880	7178.29	976.70	1203.16	-51.23	1748307.20	14443377.96	39°46'13.6198"N	80°36'57.7078"W	1204.25	357.562	3.78	-1.38	-3.52
9119.00	88.650	319.020	7180.78	1068.52	1271.99	-112.23	1748246.22	14443446.75	39°46'14.3026"N	80°36'58.4852"W	1276.93	354.958	1.32	0.45	1.24
9211.00	89.600	319.090	7182.19	1160.40	1341.47	-172.51	1748185.97	14443516.21	39°46'14.9918"N	80°36'59.2534"W	1352.52	352.672	1.04	1.03	0.08
9302.00	90.030	320.280	7182.48	1251.34	1410.86	-231.39	1748127.11	14443585.57	39°46'15.6800"N	80°37'0.0036"W	1429.70	350.686	1.39	0.47	1.31
9392.00	89.690	320.010	7182.70	1341.30	1479.94	-289.06	1748069.46	14443654.63	39°46'16.3652"N	80°37'0.7384"W	1507.91	348.948	0.48	-0.38	-0.30
9483.00	89.230	319.960	7183.56	1432.25	1549.64	-347.57	1748010.97	14443724.29	39°46'17.0564"N	80°37'1.4840"W	1588.14	347.358	0.51	-0.51	-0.05
9573.00	88.060	319.760	7185.69	1522.18	1618.42	-405.57	1747952.99	14443793.05	39°46'17.7386"N	80°37'2.2230"W	1668.46	345.931	1.32	-1.30	-0.22
9664.00	89.480	318.500	7187.64	1613.06	1687.21	-465.10	1747893.49	14443861.82	39°46'18.4210"N	80°37'2.9816"W	1750.15	344.588	2.09	1.56	-1.38
9756.00	89.260	319.230	7188.65	1704.93	1756.50	-525.62	1747833.00	14443931.08	39°46'19.1083"N	80°37'3.7529"W	1833.46	343.341	0.83	-0.24	0.79
9843.00	90.060	319.900	7189.17	1791.87	1822.72	-582.04	1747776.59	14443997.27	39°46'19.7651"N	80°37'4.4719"W	1913.39	342.290	1.20	0.92	0.77
9933.00	89.450	321.010	7189.55	1881.84	1892.12	-639.34	1747719.31	14444066.64	39°46'20.4533"N	80°37'5.2020"W	1997.21	341.330	1.41	-0.68	1.23
10024.00	89.050	320.620	7190.74	1972.82	1962.64	-696.84	1747661.85	14444137.14	39°46'21.1528"N	80°37'5.9344"W	2082.68	340.453	0.61	-0.44	-0.43
10114.00	89.820	318.230	7191.63	2062.73	2031.00	-755.37	1747603.34	14444205.47	39°46'21.8307"N	80°37'6.6803"W	2166.92	339.599	2.79	0.86	-2.66
10204.00	88.580	320.940	7192.89	2152.65	2099.50	-813.70	1747545.02	14444273.95	39°46'22.5102"N	80°37'7.4237"W	2251.67	338.815	3.31	-1.38	3.01
10297.00	90.650	319.300	7193.51	2245.60	2170.86	-873.33	1747485.42	14444345.28	39°46'23.2179"N	80°37'8.1834"W	2339.95	338.085	2.84	2.23	-1.76
10389.00	89.420	319.890	7193.46	2337.53	2240.92	-932.96	1747425.81	14444415.31	39°46'23.9128"N	80°37'8.9433"W	2427.37	337.397	1.48	-1.34	0.64
10479.00	89.320	319.770	7194.45	2427.48	2309.69	-991.01	1747367.78	14444484.05	39°46'24.5948"N	80°37'9.6831"W	2513.31	336.777	0.17	-0.11	-0.13
10571.00	89.450	319.520	7195.43	2519.41	2379.79	-1050.58	1747308.24	14444554.13	39°46'25.2901"N	80°37'10.4422"W	2601.37	336.181	0.31	0.14	-0.27
10664.00	89.170	320.950	7196.55	2612.37	2451.27	-1110.06	1747248.78	14444625.58	39°46'25.9990"N	80°37'11.2001"W	2690.90	335.637	1.57	-0.30	1.54
10755.00	89.170	318.110	7197.87	2703.28	2520.48	-1169.11	1747189.75	14444694.76	39°46'26.6855"N	80°37'11.9526"W	2778.43	335.116	3.12	0.00	-3.12
10848.00	89.780	319.360	7198.73	2796.14	2590.38	-1230.45	1747128.44	14444764.64	39°46'27.3789"N	80°37'12.7343"W	2867.77	334.592	1.50	0.66	1.34
10941.00	89.660	319.940	7199.18	2889.08	2661.26	-1290.66	1747068.25	14444835.48	39°46'28.0818"N	80°37'13.5016"W	2957.72	334.128	0.64	-0.13	0.62
11031.00	89.660	320.210	7199.71	2979.04	2730.28	-1348.42	1747010.52	14444904.48	39°46'28.7664"N	80°37'14.2376"W	3045.10	333.716	0.30	0.00	0.30
11124.00	88.060	319.060	7201.56	3071.95	2801.12	-1408.63	1746950.32	14444975.29	39°46'29.4690"N	80°37'15.0050"W	3135.37	333.303	2.12	-1.72	-1.24
11216.00	90.650	319.130	7202.60	3163.84	2870.64	-1468.87	1746890.11	14445044.79	39°46'30.1586"N	80°37'15.7727"W	3224.62	332.902	2.82	2.82	0.08
11307.00	90.310	319.970	7201.84	3254.77	2939.89	-1527.90	1746831.10	14445114.00	39°46'30.8454"N	80°37'16.5251"W	3313.22	332.538	1.00	-0.37	0.92
11400.00	90.180	320.270	7201.44	3347.73	3011.25	-1587.53	1746771.49	14445185.34	39°46'31.5531"N	80°37'17.2849"W	3404.10	332.202	0.35	-0.14	0.32
11492.00	90.280	319.940	7201.07	3439.69	3081.84	-1646.54	1746712.51	14445255.90	39°46'32.2532"N	80°37'18.0368"W	3494.11	331.886	0.37	0.11	-0.36



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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 3H
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 3H AWB
Slot	Slot 3H		

WELLPATH DATA (256 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]
11585.00	90.030	319.760	7200.82	3532.64	3152.92	-1706.50	1746652.57	14445326.96	39°46'32.9582"N	80°37'18.8010"W	3585.12	331.576	0.33	-0.27	-0.19
11677.00	90.090	319.100	7200.72	3624.56	3222.81	-1766.34	1746592.76	14445396.81	39°46'33.6513"N	80°37'19.5636"W	3675.11	331.274	0.72	0.07	-0.72
11769.00	89.540	320.340	7201.02	3716.50	3292.99	-1825.82	1746533.30	14445466.97	39°46'34.3474"N	80°37'20.3216"W	3765.29	330.994	1.47	-0.60	1.35
11861.00	90.120	321.010	7201.29	3808.48	3364.16	-1884.12	1746475.02	14445538.11	39°46'35.0531"N	80°37'21.0644"W	3855.83	330.749	0.96	0.63	0.73
11953.00	89.140	318.780	7201.89	3900.42	3434.52	-1943.38	1746415.79	14445608.44	39°46'35.7509"N	80°37'21.8196"W	3946.22	330.497	2.65	-1.07	-2.42
12045.00	90.120	320.310	7202.48	3992.35	3504.52	-2003.07	1746356.12	14445678.42	39°46'36.4452"N	80°37'22.5804"W	4036.57	330.249	1.97	1.07	1.66
12136.00	90.550	319.180	7201.95	4083.29	3573.96	-2061.87	1746297.34	14445747.84	39°46'37.1340"N	80°37'23.3298"W	4126.08	330.019	1.33	0.47	-1.24
12227.00	90.710	321.660	7200.95	4174.25	3644.09	-2119.84	1746239.39	14445817.94	39°46'37.8294"N	80°37'24.0685"W	4215.82	329.813	2.73	0.18	2.73
12318.00	89.570	319.510	7200.73	4265.23	3714.39	-2177.62	1746181.64	14445888.21	39°46'38.5266"N	80°37'24.8047"W	4305.66	329.618	2.67	-1.25	-2.36
12409.00	90.400	320.010	7200.75	4356.17	3783.85	-2236.40	1746122.88	14445957.64	39°46'39.2155"N	80°37'25.5539"W	4395.34	329.415	1.06	0.91	0.55
12499.00	90.620	320.400	7199.95	4446.13	3853.00	-2294.00	1746065.30	14446026.76	39°46'39.9012"N	80°37'26.2879"W	4484.20	329.231	0.50	0.24	0.43
12590.00	90.620	320.480	7198.96	4537.10	3923.15	-2351.96	1746007.37	14446096.89	39°46'40.5969"N	80°37'27.0264"W	4574.15	329.057	0.09	0.00	0.09
12681.00	90.620	320.070	7197.98	4628.07	3993.14	-2410.11	1745949.24	14446166.85	39°46'41.2910"N	80°37'27.7675"W	4664.10	328.886	0.45	0.00	-0.45
12771.00	90.370	320.290	7197.20	4718.03	4062.26	-2467.74	1745891.63	14446235.94	39°46'41.9765"N	80°37'28.5019"W	4753.08	328.722	0.37	-0.28	0.24
12861.00	91.690	320.530	7195.58	4807.99	4131.61	-2525.09	1745834.30	14446305.26	39°46'42.6642"N	80°37'29.2327"W	4842.13	328.568	1.49	1.47	0.27
12952.00	91.140	319.730	7193.34	4898.92	4201.43	-2583.41	1745776.01	14446375.05	39°46'43.3566"N	80°37'29.9759"W	4932.14	328.413	1.07	-0.60	-0.88
13043.00	91.110	319.970	7191.55	4989.85	4270.97	-2642.07	1745717.37	14446444.57	39°46'44.0463"N	80°37'30.7236"W	5022.12	328.259	0.27	-0.03	0.26
13133.00	91.020	320.100	7189.88	5079.80	4339.94	-2699.87	1745659.59	14446513.51	39°46'44.7302"N	80°37'31.4602"W	5111.20	328.114	0.18	-0.10	0.14
13223.00	91.450	320.180	7187.94	5169.74	4409.01	-2757.54	1745601.94	14446582.55	39°46'45.4152"N	80°37'32.1951"W	5200.32	327.977	0.49	0.48	0.09
13314.00	90.990	320.100	7186.00	5260.68	4478.84	-2815.85	1745543.66	14446652.36	39°46'46.1078"N	80°37'32.9382"W	5290.47	327.842	0.51	-0.51	-0.09
13403.00	91.290	320.770	7184.23	5349.64	4547.44	-2872.52	1745487.00	14446720.93	39°46'46.7880"N	80°37'33.6605"W	5378.72	327.720	0.82	0.34	0.75
13493.00	91.660	320.820	7181.91	5439.60	4617.16	-2929.39	1745430.15	14446790.62	39°46'47.4794"N	80°37'34.3852"W	5468.04	327.607	0.41	0.41	0.06
13583.00	90.890	320.020	7179.91	5529.55	4686.50	-2986.72	1745372.85	14446859.94	39°46'48.1671"N	80°37'35.1158"W	5557.32	327.491	1.23	-0.86	-0.89
13674.00	91.170	319.960	7178.27	5620.49	4756.19	-3045.22	1745314.37	14446929.60	39°46'48.8582"N	80°37'35.8613"W	5647.54	327.370	0.31	0.31	-0.07
13764.00	91.020	319.840	7176.55	5710.43	4825.02	-3103.18	1745256.44	14446998.41	39°46'49.5408"N	80°37'36.6000"W	5736.77	327.253	0.21	-0.17	-0.13
13856.00	90.430	319.160	7175.39	5802.35	4894.97	-3162.92	1745196.71	14447068.33	39°46'50.2346"N	80°37'37.3615"W	5827.94	327.131	0.98	-0.64	-0.74
13947.00	90.520	319.440	7174.64	5893.26	4963.96	-3222.26	1745137.40	14447137.29	39°46'50.9188"N	80°37'38.1179"W	5918.10	327.011	0.32	0.10	0.31
14037.00	90.250	319.700	7174.03	5983.19	5032.47	-3280.63	1745079.06	14447205.77	39°46'51.5982"N	80°37'38.8618"W	6007.35	326.900	0.42	-0.30	0.29
14128.00	91.080	320.160	7172.97	6074.14	5102.10	-3339.20	1745020.51	14447275.38	39°46'52.2888"N	80°37'39.6084"W	6097.68	326.796	1.04	0.91	0.51
14218.00	90.770	319.590	7171.52	6164.08	5170.91	-3397.20	1744962.53	14447344.16	39°46'52.9712"N	80°37'40.3476"W	6187.02	326.696	0.72	-0.34	-0.63



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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 3H
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 3H AWB
Slot	Slot 3H		

WELLPATH DATA (256 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]
14309.00	90.830	319.570	7170.25	6255.00	5240.18	-3456.19	1744903.56	14447413.40	39°46'53.6582"N	80°37'41.0996"W	6277.32	326.593	0.07	0.07	-0.02
14399.00	90.830	319.680	7168.95	6344.93	5308.74	-3514.49	1744845.29	14447481.93	39°46'54.3381"N	80°37'41.8426"W	6366.66	326.495	0.12	0.00	0.12
14490.00	91.200	319.850	7167.34	6435.86	5378.20	-3573.26	1744786.54	14447551.37	39°46'55.0269"N	80°37'42.5917"W	6457.02	326.400	0.45	0.41	0.19
14582.00	91.690	320.310	7165.02	6527.79	5448.73	-3632.28	1744727.54	14447621.87	39°46'55.7264"N	80°37'43.3439"W	6548.44	326.311	0.73	0.53	0.50
14675.00	91.050	320.840	7162.79	6620.75	5520.55	-3691.32	1744668.52	14447693.66	39°46'56.4386"N	80°37'44.0964"W	6640.96	326.231	0.89	-0.69	0.57
14766.00	89.720	319.010	7162.18	6711.69	5590.18	-3749.90	1744609.97	14447763.26	39°46'57.1291"N	80°37'44.8430"W	6731.41	326.146	2.49	-1.46	-2.01
14858.00	90.710	318.860	7161.83	6803.58	5659.54	-3810.34	1744549.56	14447832.60	39°46'57.8170"N	80°37'45.6135"W	6822.69	326.049	1.09	1.08	-0.16
14949.00	90.800	319.370	7160.64	6894.47	5728.33	-3869.89	1744490.02	14447901.37	39°46'58.4993"N	80°37'46.3727"W	6913.02	325.958	0.57	0.10	0.56
15040.00	90.740	320.260	7159.41	6985.41	5797.85	-3928.61	1744431.33	14447970.85	39°46'59.1887"N	80°37'47.1211"W	7003.50	325.879	0.98	-0.07	0.98
15132.00	90.460	319.700	7158.45	7077.36	5868.30	-3987.76	1744372.20	14448041.28	39°46'59.8874"N	80°37'47.8751"W	7095.01	325.802	0.68	-0.30	-0.61
15224.00	90.370	319.890	7157.78	7169.30	5938.56	-4047.15	1744312.83	14448111.51	39°47'0.5842"N	80°37'48.6321"W	7186.51	325.725	0.23	-0.10	0.21
15315.00	91.170	320.110	7156.56	7260.25	6008.26	-4105.64	1744254.37	14448181.19	39°47'1.2754"N	80°37'49.3776"W	7277.05	325.654	0.91	0.88	0.24
15407.00	90.830	320.980	7154.95	7352.22	6079.29	-4164.09	1744195.94	14448252.18	39°47'1.9797"N	80°37'50.1226"W	7368.68	325.590	1.02	-0.37	0.95
15499.00	90.710	319.920	7153.72	7444.18	6150.22	-4222.67	1744137.38	14448323.09	39°47'2.6831"N	80°37'50.8691"W	7460.30	325.527	1.16	-0.13	-1.15
15589.00	90.430	319.470	7152.82	7534.12	6218.85	-4280.88	1744079.19	14448391.69	39°47'3.3637"N	80°37'51.6112"W	7549.84	325.458	0.59	-0.31	-0.50
15682.00	90.650	319.710	7151.95	7627.05	6289.66	-4341.17	1744018.93	14448462.47	39°47'4.0659"N	80°37'52.3796"W	7642.35	325.386	0.35	0.24	0.26
15774.00	91.110	320.270	7150.53	7718.99	6360.12	-4400.31	1743959.81	14448532.90	39°47'4.7646"N	80°37'53.1335"W	7733.94	325.322	0.79	0.50	0.61
15866.00	90.400	320.380	7149.32	7810.96	6430.92	-4459.04	1743901.11	14448603.68	39°47'5.4667"N	80°37'53.8821"W	7825.58	325.264	0.78	-0.77	0.12
15957.00	90.800	320.120	7148.37	7901.92	6500.88	-4517.22	1743842.94	14448673.61	39°47'6.1605"N	80°37'54.6237"W	7916.23	325.206	0.52	0.44	-0.29
16047.00	90.860	320.420	7147.06	7991.88	6570.09	-4574.74	1743785.45	14448742.79	39°47'6.8468"N	80°37'55.3568"W	8005.89	325.151	0.34	0.07	0.33
16139.00	90.950	319.910	7145.61	8083.83	6640.73	-4633.67	1743726.54	14448813.40	39°47'7.5473"N	80°37'56.1079"W	8097.54	325.094	0.56	0.10	-0.55
16230.00	90.520	319.580	7144.44	8174.77	6710.17	-4692.47	1743667.77	14448882.82	39°47'8.2359"N	80°37'56.8575"W	8188.14	325.035	0.60	-0.47	-0.36
16320.00	90.740	319.750	7143.45	8264.70	6778.77	-4750.72	1743609.54	14448951.39	39°47'8.9163"N	80°37'57.6000"W	8277.74	324.976	0.31	0.24	0.19
16411.00	90.800	319.710	7142.23	8355.64	6848.20	-4809.53	1743550.75	14449020.79	39°47'9.6048"N	80°37'58.3498"W	8368.36	324.919	0.08	0.07	-0.04
16501.00	90.950	320.040	7140.86	8445.58	6917.01	-4867.53	1743492.78	14449089.58	39°47'10.2871"N	80°37'59.0891"W	8458.00	324.866	0.40	0.17	0.37
16591.00	90.920	320.130	7139.39	8535.53	6986.03	-4925.27	1743435.06	14449158.57	39°47'10.9716"N	80°37'59.8251"W	8547.68	324.816	0.11	-0.03	0.10
16683.00	90.890	320.640	7137.94	8627.49	7056.89	-4983.92	1743376.43	14449229.41	39°47'11.6742"N	80°38'0.5727"W	8639.39	324.768	0.56	-0.03	0.55
16775.00	90.770	319.690	7136.60	8719.44	7127.53	-5042.85	1743317.52	14449300.02	39°47'12.3747"N	80°38'1.3238"W	8731.09	324.720	1.04	-0.13	-1.03
16865.00	90.740	319.970	7135.42	8809.38	7196.29	-5100.90	1743259.50	14449368.76	39°47'13.0567"N	80°38'2.0638"W	8820.76	324.670	0.31	-0.03	0.31
16955.00	91.170	320.040	7133.92	8899.33	7265.23	-5158.73	1743201.68	14449437.67	39°47'13.7403"N	80°38'2.8011"W	8910.45	324.623	0.48	0.48	0.08



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Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 3H AWB
Slot	Slot 3H		

WELLPATH DATA (256 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]
17048.00	91.260	320.640	7131.94	8992.28	7336.81	-5218.08	1743142.36	14449509.22	39°47'14.4501"N	80°38'3.5575"W	9003.17	324.579	0.65	0.10	0.65
17140.00	91.690	319.830	7129.58	9084.21	7407.50	-5276.90	1743083.56	14449579.89	39°47'15.1511"N	80°38'4.3074"W	9094.88	324.535	1.00	0.47	-0.88
17230.00	91.480	320.050	7127.09	9174.13	7476.36	-5334.80	1743025.68	14449648.72	39°47'15.8339"N	80°38'5.0455"W	9184.56	324.490	0.34	-0.23	0.24
17322.00	90.650	322.530	7125.38	9266.11	7548.13	-5392.32	1742968.18	14449720.46	39°47'16.5455"N	80°38'5.7786"W	9276.39	324.458	2.84	-0.90	2.70
17414.00	93.290	325.520	7122.21	9357.96	7622.53	-5446.33	1742914.20	14449794.82	39°47'17.2829"N	80°38'6.4665"W	9368.32	324.454	4.33	2.87	3.25
17506.00	93.200	328.310	7117.01	9449.43	7699.48	-5496.46	1742864.09	14449871.75	39°47'18.0454"N	80°38'7.1047"W	9460.08	324.478	3.03	-0.10	3.03
17596.00	92.150	327.820	7112.80	9538.79	7775.77	-5544.01	1742816.55	14449948.01	39°47'18.8013"N	80°38'7.7099"W	9549.80	324.512	1.29	-1.17	-0.54
17689.00	93.820	327.460	7107.96	9631.17	7854.22	-5593.72	1742766.86	14450026.43	39°47'19.5786"N	80°38'8.3425"W	9642.54	324.542	1.84	1.80	-0.39
17780.00	92.280	328.390	7103.12	9721.51	7931.22	-5641.98	1742718.63	14450103.39	39°47'20.3414"N	80°38'8.9567"W	9733.25	324.573	1.98	-1.69	1.02
17870.00	92.150	326.560	7099.64	9811.00	8007.04	-5690.33	1742670.29	14450179.19	39°47'21.0927"N	80°38'9.5721"W	9823.06	324.600	2.04	-0.14	-2.03
17961.00	92.400	326.230	7096.03	9901.63	8082.77	-5740.65	1742619.99	14450254.89	39°47'21.8432"N	80°38'10.2128"W	9913.94	324.616	0.45	0.27	-0.36
18050.00	90.310	326.550	7093.92	9990.31	8156.87	-5789.90	1742570.76	14450328.96	39°47'22.5774"N	80°38'10.8399"W	10002.87	324.632	2.38	-2.35	0.36
18142.00	90.310	326.560	7093.43	10081.98	8233.63	-5840.60	1742520.08	14450405.69	39°47'23.3381"N	80°38'11.4854"W	10094.82	324.650	0.01	0.00	0.01
18234.00	90.650	326.580	7092.66	10173.66	8310.41	-5891.29	1742469.41	14450482.44	39°47'24.0989"N	80°38'12.1307"W	10186.77	324.667	0.37	0.37	0.02
18323.00	89.690	326.530	7092.39	10262.34	8384.67	-5940.34	1742420.38	14450556.67	39°47'24.8347"N	80°38'12.7552"W	10275.72	324.683	1.08	-1.08	-0.06
18414.00	89.910	326.510	7092.71	10353.03	8460.57	-5990.54	1742370.20	14450632.54	39°47'25.5868"N	80°38'13.3943"W	10366.67	324.699	0.24	0.24	-0.02
18504.00	89.910	326.680	7092.85	10442.71	8535.70	-6040.09	1742320.67	14450707.65	39°47'26.3313"N	80°38'14.0252"W	10456.62	324.716	0.19	0.00	0.19
18596.00	89.970	326.500	7092.95	10534.38	8612.50	-6090.74	1742270.03	14450784.41	39°47'27.0923"N	80°38'14.6701"W	10548.57	324.732	0.21	0.07	-0.20
18686.00	89.970	326.460	7092.99	10624.08	8687.53	-6140.44	1742220.35	14450859.42	39°47'27.8358"N	80°38'15.3029"W	10638.53	324.747	0.04	0.00	-0.04
18778.00	89.570	326.160	7093.36	10715.79	8764.08	-6191.48	1742169.34	14450935.94	39°47'28.5944"N	80°38'15.9527"W	10730.49	324.760	0.54	-0.43	-0.33
18869.00	89.780	326.920	7093.88	10806.47	8840.00	-6241.65	1742119.19	14451011.82	39°47'29.3466"N	80°38'16.5915"W	10821.45	324.775	0.87	0.23	0.84
18960.00	89.910	326.590	7094.13	10897.12	8916.11	-6291.54	1742069.32	14451087.90	39°47'30.1007"N	80°38'17.2267"W	10912.39	324.792	0.39	0.14	-0.36
19053.00	89.850	326.780	7094.32	10989.78	8993.82	-6342.62	1742018.26	14451165.59	39°47'30.8708"N	80°38'17.8770"W	11005.34	324.808	0.21	-0.06	0.20
19143.00	89.350	326.640	7094.95	11079.44	9069.05	-6392.01	1741968.88	14451240.79	39°47'31.6163"N	80°38'18.5059"W	11095.29	324.823	0.58	-0.56	-0.16
19234.00	90.890	326.720	7094.76	11170.10	9145.09	-6442.00	1741918.91	14451316.79	39°47'32.3697"N	80°38'19.1424"W	11186.24	324.838	1.69	1.69	0.09
19324.00	90.620	326.720	7093.57	11259.76	9220.32	-6491.38	1741869.55	14451392.00	39°47'33.1152"N	80°38'19.7711"W	11276.19	324.853	0.30	-0.30	0.00
19415.00	91.110	327.080	7092.20	11350.38	9296.55	-6541.07	1741819.88	14451468.19	39°47'33.8704"N	80°38'20.4037"W	11367.12	324.870	0.67	0.54	0.40
19506.00	90.620	326.880	7090.83	11440.99	9372.84	-6590.65	1741770.32	14451544.46	39°47'34.6264"N	80°38'21.0350"W	11458.05	324.886	0.58	-0.54	-0.22
19597.00	89.200	326.190	7090.97	11531.67	9448.75	-6640.83	1741720.16	14451620.34	39°47'35.3786"N	80°38'21.6739"W	11549.01	324.899	1.73	-1.56	-0.76
19688.00	90.120	324.740	7091.51	11622.48	9523.71	-6692.42	1741668.59	14451695.27	39°47'36.1214"N	80°38'22.3309"W	11640.00	324.904	1.89	1.01	-1.59



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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Gladys Briggs MSH 3H
Field	Marshall	API/Legal	
Facility	Gladys Briggs MSH Pad	Wellbore	Gladys Briggs MSH 3H AWB
Slot	Slot 3H		

WELLPATH DATA (256 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]
19780.00	90.120	325.520	7091.32	11714.32	9599.19	-6745.01	1741616.02	14451770.72	39°47'36.8695"N	80°38'23.0008"W	11731.99	324.906	0.85	0.00	0.85
19870.00	91.020	326.870	7090.42	11804.04	9673.97	-6795.08	1741565.97	14451845.47	39°47'37.6105"N	80°38'23.6384"W	11821.96	324.915	1.80	1.00	1.50
19961.00	90.710	326.090	7089.05	11894.72	9749.83	-6845.33	1741515.74	14451921.30	39°47'38.3621"N	80°38'24.2782"W	11912.92	324.927	0.92	-0.34	-0.86
20051.00	91.380	327.550	7087.40	11984.35	9825.14	-6894.57	1741466.51	14451996.58	39°47'39.1084"N	80°38'24.9052"W	12002.85	324.942	1.78	0.74	1.62
20142.00	90.920	326.830	7085.58	12074.92	9901.60	-6943.87	1741417.24	14452073.02	39°47'39.8660"N	80°38'25.5329"W	12093.76	324.958	0.94	-0.51	-0.79
20232.00	90.800	325.720	7084.23	12164.63	9976.45	-6993.84	1741367.29	14452147.83	39°47'40.6077"N	80°38'26.1691"W	12183.73	324.968	1.24	-0.13	-1.23
20323.00	91.290	326.010	7082.57	12255.39	10051.76	-7044.89	1741316.26	14452223.11	39°47'41.3539"N	80°38'26.8193"W	12274.70	324.975	0.63	0.54	0.32
20414.00	91.170	326.260	7080.61	12346.10	10127.30	-7095.59	1741265.58	14452298.63	39°47'42.1025"N	80°38'27.4649"W	12365.66	324.983	0.30	-0.13	0.27
20505.00	90.800	326.540	7079.05	12436.79	10203.09	-7145.94	1741215.25	14452374.38	39°47'42.8535"N	80°38'28.1061"W	12456.62	324.994	0.51	-0.41	0.31
20596.00	90.710	326.300	7077.85	12527.48	10278.89	-7196.27	1741164.94	14452450.16	39°47'43.6046"N	80°38'28.7470"W	12547.59	325.004	0.28	-0.10	-0.26
20685.00	91.200	326.860	7076.37	12616.15	10353.17	-7245.28	1741115.95	14452524.40	39°47'44.3406"N	80°38'29.3711"W	12636.54	325.015	0.84	0.55	0.63
20778.00	90.770	326.090	7074.77	12708.82	10430.68	-7296.63	1741064.61	14452601.89	39°47'45.1087"N	80°38'30.0250"W	12729.49	325.026	0.95	-0.46	-0.83
20871.00	89.720	326.540	7074.37	12801.53	10508.07	-7348.21	1741013.05	14452679.24	39°47'45.8755"N	80°38'30.6819"W	12822.47	325.035	1.23	-1.13	0.48
20964.00	89.510	326.240	7075.00	12894.22	10585.52	-7399.69	1740961.60	14452756.66	39°47'46.6429"N	80°38'31.3374"W	12915.44	325.045	0.39	-0.23	-0.32
21029.00	89.910	326.550	7075.33	12959.01	10639.65	-7435.67	1740925.63	14452810.78	39°47'47.1793"N	80°38'31.7955"W	12980.42	325.052	0.78	0.62	0.48
21054.00‡	89.910	326.550	7075.36	12983.92	10660.51	-7449.45	1740911.86	14452831.63	39°47'47.3860"N	80°38'31.9710"W	13005.41	325.055	0.00	0.00	0.00



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Slot	Slot 3H		

HOLE & CASING SECTIONS - Ref Wellbore: Gladys Briggs MSH 3H AWB Ref Wellpath: Gladys Briggs MSH 3H AWP Proj: 21054'

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	-0.19	-0.29
17.5in Open Hole	126.00	803.00	677.00	126.00	802.99	-0.19	-0.29	-2.97	0.75
13.375in Casing Surface	26.00	803.00	777.00	26.00	802.99	0.00	0.00	-2.97	0.75
12.25in Open Hole	803.00	2622.00	1819.00	802.99	2592.54	-2.97	0.75	85.52	206.32
9.625in Casing Intermediate	26.00	2622.00	2596.00	26.00	2592.54	0.00	0.00	85.52	206.32
8.75in Open Hole	2622.00	5942.00	3320.00	2592.54	5771.89	85.52	206.32	-303.30	1073.56
8.5in Open Hole	5942.00	21054.00	15112.00	5771.89	7075.36	-303.30	1073.56	10660.51	-7449.45
5.5in Casing Production	26.00	21054.00	21028.00	26.00	7075.36	0.00	0.00	10660.51	-7449.45

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Gladys Briggs MSH 3H LP Rev-2	7151.00	200.34	803.63	1749161.73	14442375.52	39°46'3.6729"N	80°36'46.8152"W	point
Gladys Briggs MSH 3H BHL Rev-3	7314.10	10668.12	-7445.40	1740915.90	14452839.23	39°47'47.4610"N	80°38'31.9188"W	point

WELLPATH COMPOSITION - Ref Wellbore: Gladys Briggs MSH 3H AWB Ref Wellpath: Gladys Briggs MSH 3H AWP Proj: 21054'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	750.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata <17-1/2"> (50'-750')	Gladys Briggs MSH 3H AWB	6/2/2021
750.00	2638.00	OWSG MWD rev2 + HRGM	02 Premier MWD <12-1/4"> (861'-2638')	Gladys Briggs MSH 3H AWB	6/2/2021
2638.00	5878.00	OWSG MWD rev2 + HRGM	03 Premier MWD <8-3/4"> (2744'-5878')	Gladys Briggs MSH 3H AWB	6/2/2021
5878.00	21054.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH AT Curve <8-1/2"> (5945'-21029')	Gladys Briggs MSH 3H AWB	6/2/2021



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Slot	Slot 3H		

COMMENTS

Wellpath general comments

API: 47-051-02369-0000

BH Job #: 110870177

Rig: SDC 41

Duration: 06/04/2021 - 06/06/2021