



# SWN PRODUCTION COMPANY, LLC



Location: Marshall County, WV  
 Field: Marshall  
 Facility: Betty Schafer MSH Pad

Slot: 401H  
 Well: Betty Schafer MSH 401H  
 Wellbore: Betty Schafer MSH 401H AWB

Plot reference wellpath is Betty Schafer MSH 401H awp Proj: 31266'	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: 874.7 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: 401H): -848.7 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: tranlam on 2024-04-08; Database: WA_MPL_EASTERNUS_Defn

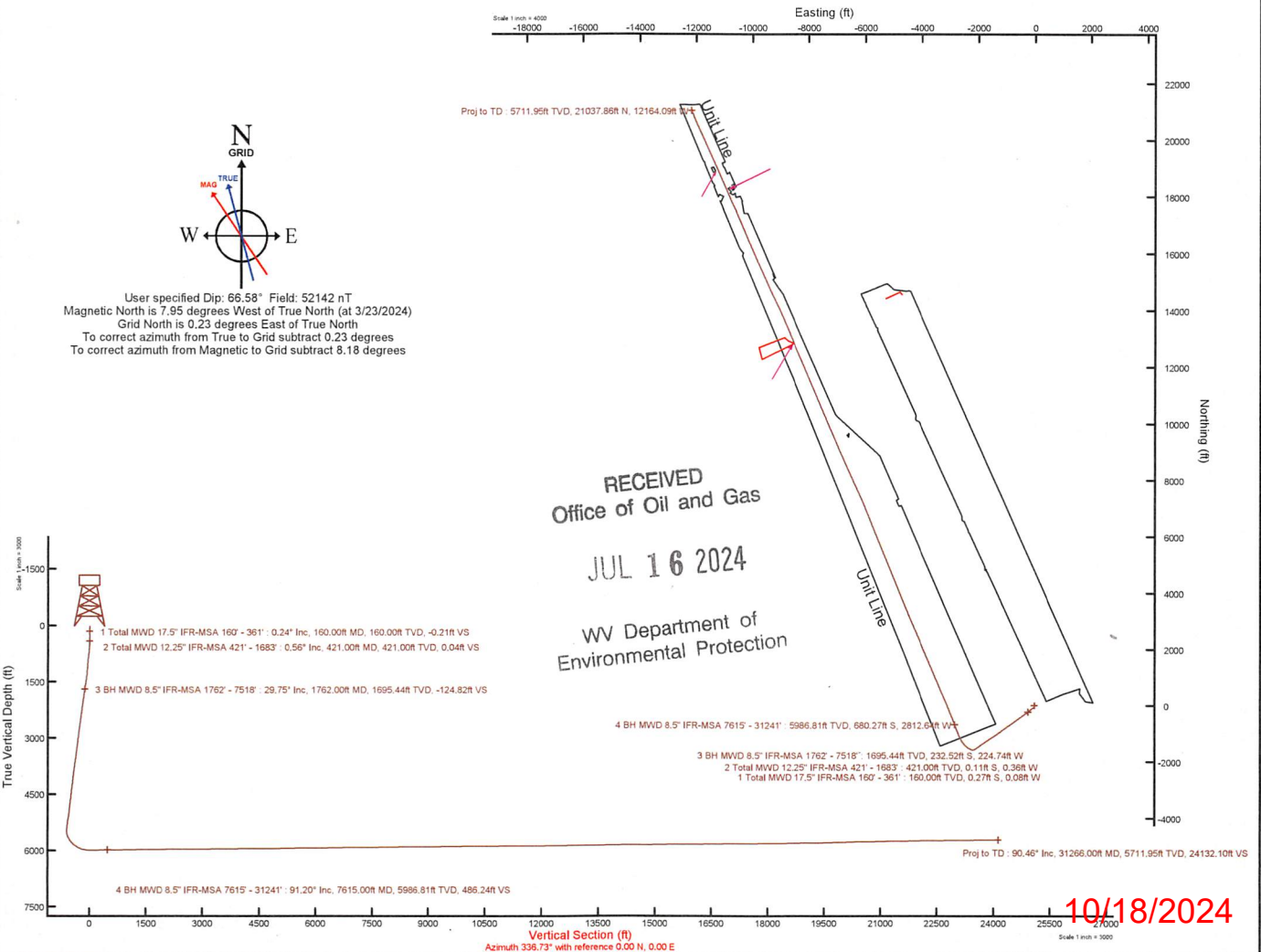
### Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Betty Schafer MSH Pad			1742491.842	14523656.697	39°59'27.5194"N	80°38'8.0179"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
401H	-39.20	-7.24	1742484.600	14523617.510	39°59'27.1323"N	80°38'8.1130"W
SDC 41 (KB) to Ground level (At Slot: 401H)					26ft	
Mean Sea Level to Ground level (At Slot: 401H)					-848.7ft	
SDC 41 (KB) to Mean Sea Level					874.7ft	

### Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
31266.00	90.460	337.630	5711.95	21037.86	-12164.09	1730325.25	14544647.16	40°02'55.4958"N	80°40'43.4209"W

API: 47051018710000  
 BH JOB: 112078037  
 DURATION: 03-28-2024 to 04-06-2024  
 RIG: SDC 41





# Actual Wellpath Report

Betty Schafer MSH 401H awp Proj: 31266'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Betty Schafer MSH 401H
Field	Marshall	API	47051018710000
Facility	Betty Schafer MSH Pad	Wellbore	Betty Schafer MSH 401H AWB
Slot	401H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Tranlam
Scale	0.999612	Report Generated	4/8/2024 at 10:26:56 AM
Convergence at slot	0.23° 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	-39.20	-7.24	1742484.60	14523617.51	39°59'27.1323"N	80°38'8.1130"W
Facility Reference Pt			1742491.84	14523656.70	39°59'27.5194"N	80°38'8.0179"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	874.70ft
Horizontal Reference Pt	Slot	SDC 41 (KB) to Mean Sea Level	874.70ft
Vertical Reference Pt	SDC 41 (KB)	SDC 41 (KB) to Ground Level at Slot (401H)	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	336.73°



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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC
Field	Marshall
Facility	Betty Schaffer MSH Pad
Slot	401H
	Wellbore
	Betty Schaffer MSH 401H AWB
	API
	47051018710000
	Well
	Betty Schaffer MSH 401H

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]
0.00	0.00	197.100	0.00	0.00	0.00	0.00	1742484.60	14523617.51	39°59'27.1323"N	80°38'8.1130"W	0.00	0.00	0.00
26.00	0.000	197.100	26.00	0.00	0.00	0.00	1742484.60	14523617.51	39°59'27.1323"N	80°38'8.1130"W	0.00	0.00	0.00
160.00	0.240	197.100	160.00	-0.21	-0.27	-0.08	1742484.52	14523617.24	39°59'27.1297"N	80°38'8.1141"W	0.28	0.28	197.100
229.00	0.130	252.200	229.00	-0.32	-0.43	-0.20	1742484.40	14523617.08	39°59'27.1281"N	80°38'8.1156"W	0.47	0.47	204.879
318.00	0.220	257.760	318.00	-0.27	-0.50	-0.46	1742484.14	14523617.01	39°59'27.1274"N	80°38'8.1190"W	0.68	0.68	222.929
361.00	0.190	359.800	361.00	-0.19	-0.44	-0.54	1742484.06	14523617.07	39°59'27.1280"N	80°38'8.1200"W	0.70	0.70	230.784
421.00	0.560	37.820	421.00	0.04	-0.11	-0.36	1742484.24	14523617.40	39°59'27.1312"N	80°38'8.1177"W	0.38	0.38	252.833
513.00	1.970	102.630	512.98	-0.67	-0.10	1.45	1742486.05	14523617.41	39°59'27.1312"N	80°38'8.0943"W	1.46	1.46	94.054
602.00	4.120	127.530	601.85	-4.36	-2.39	5.48	1742490.08	14523615.13	39°59'27.1085"N	80°38'8.0427"W	5.98	113.511	2.78
691.00	6.160	152.800	690.50	-11.91	-8.58	10.20	1742494.80	14523608.93	39°59'27.0471"N	80°38'7.9824"W	13.33	130.068	3.37
779.00	7.610	171.480	777.87	-22.26	-18.55	13.22	1742497.82	14523598.97	39°59'26.9485"N	80°38'7.9441"W	22.78	144.507	3.01
866.00	8.590	195.820	864.03	-32.88	-30.50	12.31	1742496.90	14523587.02	39°59'26.8304"N	80°38'7.9565"W	32.89	158.024	4.07
957.00	9.990	218.370	953.86	-41.91	-43.23	5.55	1742490.15	14523574.30	39°59'26.7049"N	80°38'8.0439"W	43.58	172.682	4.25
1048.00	12.100	226.210	1043.18	-49.00	-56.02	-6.23	1742478.37	14523561.51	39°59'26.5790"N	80°38'8.1960"W	56.37	186.351	2.84
1139.00	14.900	228.710	1131.65	-55.96	-70.34	-21.91	1742462.69	14523547.19	39°59'26.4381"N	80°38'8.3982"W	73.68	197.303	3.14
1228.00	17.910	232.140	1217.02	-62.95	-86.30	-41.32	1742443.30	14523531.25	39°59'26.2812"N	80°38'8.6484"W	95.68	205.586	3.55
1319.00	21.400	233.180	1302.71	-70.21	-104.71	-65.76	1742418.86	14523512.84	39°59'26.1002"N	80°38'8.9634"W	123.65	212.131	3.88
1410.00	24.930	233.140	1386.36	-78.44	-126.03	-94.51	1742390.13	14523491.53	39°59'25.8907"N	80°38'9.3339"W	157.53	216.87	3.89
1410.00	28.680	232.210	1467.56	-88.41	-150.91	-127.13	1742357.52	14523466.66	39°59'25.6461"N	80°38'9.7543"W	197.33	220.112	4.15
1501.00	28.970	230.440	1547.29	-100.07	-178.33	-161.38	1742323.28	14523439.25	39°59'25.3765"N	80°38'10.1957"W	240.51	222.144	0.99
1592.00	29.410	229.200	1626.73	-112.98	-206.96	-195.28	1742289.39	14523410.63	39°59'25.0949"N	80°38'10.6328"W	284.55	223.337	0.82
1683.00	29.750	228.900	1695.44	-124.82	-224.74	-224.74	1742259.95	14523385.08	39°59'24.8435"N	80°38'11.0126"W	323.38	224.024	0.47
1790.00	29.830	227.930	1719.74	-129.19	-241.76	-235.14	1742249.55	14523375.85	39°59'24.7527"N	80°38'11.1467"W	337.25	224.205	1.74
1878.00	31.370	235.840	1795.51	-140.58	-269.30	-270.36	1742214.35	14523348.32	39°59'24.4820"N	80°38'11.6006"W	381.59	225.113	4.90
1969.00	31.420	235.660	1873.19	-149.61	-295.98	-309.54	1742175.18	14523321.65	39°59'24.2199"N	80°38'12.1055"W	428.27	226.284	0.12
2060.00	31.610	234.640	1950.77	-159.16	-323.16	-348.58	1742136.16	14523294.48	39°59'23.9528"N	80°38'12.6084"W	475.33	227.167	0.62
2151.00	31.300	233.770	2028.40	-169.46	-350.93	-387.10	1742097.66	14523266.72	39°59'23.6799"N	80°38'13.1047"W	522.49	227.805	0.60
2242.00	31.520	233.820	2106.06	-180.07	-378.94	-425.36	1742059.40	14523238.71	39°59'23.4047"N	80°38'13.5978"W	569.68	228.303	0.24
2332.00	31.460	234.650	2182.81	-190.24	-406.42	-463.51	1742021.27	14523211.25	39°59'23.1347"N	80°38'14.0893"W	616.45	228.755	0.49
2424.00	31.460	234.250	2261.28	-200.45	-434.34	-502.57	1741982.22	14523183.34	39°59'22.8604"N	80°38'14.5927"W	664.25	229.166	0.23

WELLPATH DATA (338 stations) † = interpolated, ‡ = extrapolated station

Actual Wellpath Report

Betty Schaffer MSH 401H awp Proj: 31266

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Field	Marshall	API	47051018710000
Facility	Betty Schafer MSH Pad	Wellbore	Betty Schafer MSH 401H AWB
Slot	401H		

WELLPATH DATA (338 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]
2515.00	31.360	234.310	2338.95	-210.68	-462.02	-541.08	1741943.73	14523155.67	39°59'22.5883"N	80°38'15.0888"W	711.50	229.506	0.12
2605.00	31.320	233.890	2415.82	-220.91	-489.47	-579.00	1741905.83	14523128.23	39°59'22.3186"N	80°38'15.5774"W	758.17	229.789	0.25
2696.00	30.940	234.160	2493.71	-231.26	-517.11	-617.07	1741867.77	14523100.60	39°59'22.0470"N	80°38'16.0680"W	805.09	230.037	0.44
2786.00	31.120	233.850	2570.83	-241.48	-544.37	-654.60	1741830.25	14523073.35	39°59'21.7790"N	80°38'16.5516"W	851.38	230.253	0.27
2877.00	31.290	234.180	2648.67	-251.86	-572.08	-692.75	1741792.12	14523045.66	39°59'21.5068"N	80°38'17.0432"W	898.43	230.450	0.26
2967.00	31.420	233.980	2725.52	-262.11	-599.55	-730.68	1741754.21	14523018.19	39°59'21.2368"N	80°38'17.5319"W	945.17	230.630	0.19
3058.00	30.860	233.800	2803.41	-272.57	-627.28	-768.70	1741716.20	14522990.47	39°59'20.9643"N	80°38'18.0218"W	992.16	230.784	0.62
3149.00	31.760	235.380	2881.16	-282.51	-654.67	-807.24	1741677.67	14522963.09	39°59'20.6951"N	80°38'18.5184"W	1039.34	230.958	1.34
3241.00	31.420	234.710	2959.53	-292.27	-682.28	-846.74	1741638.19	14522935.49	39°59'20.4239"N	80°38'19.0273"W	1087.42	231.139	0.53
3332.00	31.740	235.190	3037.05	-301.99	-709.65	-885.75	1741599.19	14522908.14	39°59'20.1550"N	80°38'19.5299"W	1134.97	231.299	0.45
3420.00	31.130	235.050	3112.13	-311.23	-735.90	-923.40	1741561.56	14522881.90	39°59'19.8971"N	80°38'20.0150"W	1180.77	231.447	0.70
3511.00	29.950	234.710	3190.51	-320.72	-762.50	-961.23	1741523.75	14522855.31	39°59'19.6358"N	80°38'20.5023"W	1226.93	231.577	1.31
3601.00	29.940	234.730	3268.49	-330.07	-788.44	-997.90	1741487.09	14522829.37	39°59'19.3808"N	80°38'20.9748"W	1271.79	231.688	0.02
3692.00	31.660	234.570	3346.66	-339.82	-815.40	-1035.90	1741449.10	14522802.43	39°59'19.1159"N	80°38'21.4645"W	1318.32	231.792	1.89
3784.00	32.160	234.450	3424.75	-350.12	-843.64	-1075.50	1741409.52	14522774.20	39°59'18.8385"N	80°38'21.9746"W	1366.90	231.889	0.55
3877.00	31.930	232.940	3503.58	-361.24	-872.85	-1115.26	1741369.77	14522745.00	39°59'18.5514"N	80°38'22.4870"W	1416.22	231.952	0.90
3968.00	31.900	232.500	3580.83	-372.89	-901.99	-1153.54	1741331.51	14522715.87	39°59'18.2650"N	80°38'22.9803"W	1464.32	231.977	0.26
4061.00	30.640	232.940	3660.32	-384.58	-931.23	-1191.95	1741293.12	14522686.64	39°59'17.9775"N	80°38'23.4753"W	1512.59	232.001	1.38
4152.00	32.360	236.150	3737.91	-394.58	-958.77	-1230.68	1741254.40	14522659.11	39°59'17.7069"N	80°38'23.9744"W	1560.07	232.079	2.64
4241.00	32.350	235.680	3813.09	-403.52	-985.47	-1270.13	1741214.96	14522632.43	39°59'17.4447"N	80°38'24.4825"W	1607.60	232.193	0.28
4333.00	31.600	235.570	3891.13	-412.90	-1012.97	-1310.34	1741174.77	14522604.93	39°59'17.1745"N	80°38'25.0005"W	1656.23	232.294	0.82
4423.00	32.160	235.610	3967.56	-422.08	-1039.83	-1349.56	1741135.57	14522578.08	39°59'16.9106"N	80°38'25.5057"W	1703.69	232.386	0.62
4514.00	30.460	234.590	4045.30	-431.61	-1066.88	-1388.34	1741096.80	14522551.05	39°59'16.6448"N	80°38'26.0055"W	1750.92	232.459	1.96
4606.00	30.110	235.350	4124.75	-441.06	-1093.51	-1426.33	1741058.82	14522524.43	39°59'16.3832"N	80°38'26.4949"W	1797.27	232.524	0.56
4696.00	32.050	235.920	4201.82	-450.00	-1119.73	-1464.69	1741020.48	14522498.22	39°59'16.1256"N	80°38'26.9890"W	1843.67	232.603	2.18
4788.00	31.500	235.650	4280.04	-459.19	-1146.97	-1504.75	1740980.44	14522470.99	39°59'15.8580"N	80°38'27.5051"W	1892.04	232.684	0.62
4880.00	30.970	235.730	4358.70	-468.33	-1173.86	-1544.15	1740941.05	14522444.11	39°59'15.5938"N	80°38'28.0127"W	1939.68	232.758	0.58
4971.00	30.520	235.840	4436.91	-477.16	-1200.02	-1582.62	1740902.59	14522417.96	39°59'15.3368"N	80°38'28.5083"W	1986.14	232.829	0.50
5062.00	32.120	236.380	4514.65	-485.88	-1226.39	-1621.89	1740863.34	14522391.60	39°59'15.0778"N	80°38'29.0142"W	2033.36	232.905	1.79
5153.00	31.590	235.930	4591.94	-494.69	-1253.14	-1661.78	1740823.47	14522364.86	39°59'14.8151"N	80°38'29.5280"W	2081.31	232.980	0.64



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Field	Marshall
API	47051018710000
Facility	Betty Schafar MSH Pad
Slot	401H

WELLPATH DATA (338 stations)													
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[us ft]	[us ft]			[ft]	[°]	[100ft]
5243.00	31.600	236.300	4668.60	-503.37	-1279.43	-1700.92	1740784.34	14522338.58	39°59'14.5568"N	80°38'30.0322"W	2128.40	233.050	0.22
5335.00	31.940	236.250	4746.82	-512.16	-1306.32	-1741.21	1740744.07	14522311.70	39°59'14.2927"N	80°38'30.5512"W	2176.76	233.121	0.37
5425.00	31.090	236.240	4823.54	-520.73	-1332.46	-1780.33	1740704.97	14522285.57	39°59'14.0359"N	80°38'31.0561"W	2223.74	233.187	0.94
5515.00	31.050	235.910	4900.63	-529.31	-1358.38	-1818.87	1740666.44	14522259.66	39°59'13.7812"N	80°38'31.5515"W	2270.13	233.247	0.19
5605.00	31.770	236.290	4977.44	-537.96	-1384.54	-1857.80	1740627.53	14522233.51	39°59'13.5243"N	80°38'32.0530"W	2316.97	233.304	0.83
5696.00	32.410	234.970	5054.54	-547.28	-1411.84	-1897.70	1740587.64	14522206.22	39°59'13.2561"N	80°38'32.5670"W	2365.28	233.352	1.04
5786.00	32.390	231.250	5130.53	-558.63	-1440.77	-1936.25	1740549.11	14522177.30	39°59'12.9717"N	80°38'33.0638"W	2413.48	233.347	2.21
5877.00	32.300	234.260	5207.42	-570.38	-1470.23	-1974.99	1740510.38	14522147.85	39°59'12.6821"N	80°38'33.5631"W	2462.15	233.335	1.77
5968.00	32.540	234.510	5284.24	-580.81	-1498.64	-2014.66	1740470.73	14522119.45	39°59'12.4029"N	80°38'34.0741"W	2510.93	233.356	0.30
6059.00	30.540	234.270	5361.79	-590.98	-1526.35	-2053.36	1740432.04	14522091.75	39°59'12.1306"N	80°38'34.5727"W	2558.52	233.375	2.20
6149.00	31.270	240.230	5439.03	-598.56	-1551.31	-2092.20	1740393.21	14522066.80	39°59'11.8855"N	80°38'35.0731"W	2604.59	233.444	3.50
6240.00	31.520	257.020	5516.86	-596.98	-1568.41	-2135.97	1740349.46	14522049.71	39°59'11.7182"N	80°38'35.6362"W	2649.96	233.711	9.59
6332.00	32.530	275.080	5595.04	-580.90	-1571.63	-2184.15	1740301.30	14522024.64	39°59'11.6883"N	80°38'36.2554"W	2690.83	234.263	10.44
6423.00	35.980	292.420	5670.42	-550.07	-1559.24	-2233.37	1740252.10	14522058.88	39°59'11.8127"N	80°38'36.8870"W	2723.81	235.079	11.34
6514.00	42.340	299.000	5740.98	-506.64	-1534.15	-2284.96	1740200.53	14522083.96	39°59'12.0627"N	80°38'37.5485"W	2752.21	236.122	8.34
6605.00	48.770	304.360	5804.69	-453.43	-1499.93	-2340.09	1740145.42	14522118.17	39°59'12.4031"N	80°38'38.2550"W	2779.53	237.341	8.22
6696.00	56.900	308.710	5859.63	-390.75	-1456.69	-2398.19	1740087.34	14522161.38	39°59'12.8326"N	80°38'38.9993"W	2805.94	238.725	9.71
6787.00	61.380	315.520	5906.34	-319.77	-1404.29	-2456.00	1740099.56	14522213.77	39°59'13.3528"N	80°38'39.7393"W	2829.13	240.240	8.09
6878.00	68.320	321.860	5945.02	-241.51	-1342.41	-2510.21	1739975.37	14522275.63	39°59'13.9664"N	80°38'40.4325"W	2846.61	241.863	9.89
6970.00	76.930	328.190	5972.49	-155.64	-1270.51	-2560.37	1739925.23	145222347.50	39°59'14.6789"N	80°38'41.0732"W	2858.27	243.608	11.43
7062.00	82.630	332.660	5988.82	-65.71	-1191.80	-2605.00	1739880.62	145222426.17	39°59'15.4585"N	80°38'41.6426"W	2864.68	245.416	7.82
7152.00	89.380	333.700	5995.08	23.85	-1111.72	-2645.48	1739840.15	145222506.22	39°59'16.2514"N	80°38'42.1585"W	2869.58	247.206	7.59
7244.00	91.450	337.890	5994.42	115.81	-1027.84	-2683.19	1739802.46	145222590.07	39°59'17.0819"N	80°38'42.6387"W	2873.32	249.040	5.08
7336.00	91.200	340.170	5992.29	207.70	-941.96	-2716.10	1739769.56	145222675.92	39°59'17.9319"N	80°38'43.0572"W	2874.81	250.873	2.49
7427.00	91.510	339.880	5990.14	298.53	-856.46	-2747.18	1739738.49	145222761.39	39°59'18.7780"N	80°38'43.4521"W	2877.59	252.685	0.47
7518.00	90.680	338.530	5988.40	389.42	-771.41	-2779.48	1739706.20	145222846.41	39°59'19.6198"N	80°38'43.8627"W	2884.54	254.489	1.74
7615.00	91.200	341.480	5986.81	488.27	-680.27	-2812.64	1739673.06	145222937.50	39°59'20.5217"N	80°38'44.2841"W	2893.74	256.403	3.09
7707.00	90.620	337.840	5985.35	578.09	-594.04	-2844.61	1739641.10	14523023.70	39°59'21.3752"N	80°38'44.6904"W	2905.97	258.204	4.01
7795.00	90.710	338.140	5984.32	666.06	-512.46	-2877.59	1739608.13	14523105.25	39°59'22.1827"N	80°38'45.1099"W	2922.86	259.902	0.36
7888.00	90.740	337.840	5983.15	759.03	-426.24	-2912.44	1739573.30	14523191.43	39°59'23.0361"N	80°38'45.5533"W	2943.46	261.674	0.32

Actual Wellpath Report

Betty Schafar MSH 401H awp Proj: 31266

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# Actual Wellpath Report

Betty Schafer MSH 401H awp Proj: 31266'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Betty Schafer MSH 401H
Field	Marshall	API	47051018710000
Facility	Betty Schafer MSH Pad	Wellbore	Betty Schafer MSH 401H AWB
Slot	401H		

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7979.00	90.920	338.130	5981.83	850.00	-341.89	-2946.55	1739539.20	14523275.76	39°59'23.8710"N	80°38'45.9872"W	2966.31	263.382	0.38
8070.00	90.800	337.930	5980.46	940.97	-257.50	-2980.59	1739505.18	14523360.11	39°59'24.7062"N	80°38'46.4202"W	2991.69	265.062	0.26
8161.00	90.830	338.320	5979.17	1031.93	-173.06	-3014.49	1739471.29	14523444.51	39°59'25.5420"N	80°38'46.8515"W	3019.45	266.714	0.43
8252.00	90.860	338.950	5977.83	1122.87	-88.33	-3047.64	1739438.15	14523529.22	39°59'26.3807"N	80°38'47.2730"W	3048.92	268.340	0.69
8343.00	90.580	337.540	5976.68	1213.83	-3.82	-3081.36	1739404.44	14523613.69	39°59'27.2172"N	80°38'47.7020"W	3081.36	269.929	1.58
8434.00	90.740	337.150	5975.64	1304.82	80.15	-3116.41	1739369.40	14523697.63	39°59'28.0484"N	80°38'48.1480"W	3117.44	271.473	0.46
8524.00	90.680	336.690	5974.52	1394.81	162.94	-3151.69	1739334.14	14523780.39	39°59'28.8679"N	80°38'48.5971"W	3155.90	272.960	0.52
8616.00	90.770	336.720	5973.36	1486.80	247.44	-3188.07	1739297.77	14523864.85	39°59'29.7043"N	80°38'49.0602"W	3197.66	274.438	0.10
8706.00	90.740	337.760	5972.17	1576.79	330.42	-3222.88	1739262.97	14523947.80	39°59'30.5258"N	80°38'49.5033"W	3239.78	275.854	1.16
8797.00	90.830	336.780	5970.92	1667.78	414.35	-3258.04	1739227.83	14524031.69	39°59'31.3565"N	80°38'49.9507"W	3284.28	277.248	1.08
8887.00	90.580	336.000	5969.82	1757.77	496.80	-3294.08	1739191.80	14524114.12	39°59'32.1728"N	80°38'50.4096"W	3331.34	278.577	0.91
8978.00	90.740	336.770	5968.77	1848.76	580.18	-3330.54	1739155.36	14524197.46	39°59'32.9981"N	80°38'50.8737"W	3380.69	279.882	0.86
9068.00	90.680	336.850	5967.65	1938.75	662.90	-3365.97	1739119.94	14524280.15	39°59'33.8170"N	80°38'51.3248"W	3430.63	281.141	0.11
9159.00	90.860	336.940	5966.43	2029.74	746.59	-3401.68	1739084.25	14524363.81	39°59'34.6455"N	80°38'51.7793"W	3482.65	282.379	0.22
9250.00	90.800	336.930	5965.11	2120.73	830.31	-3437.33	1739048.61	14524447.50	39°59'35.4742"N	80°38'52.2331"W	3536.19	283.580	0.07
9340.00	89.850	336.600	5964.60	2210.73	913.01	-3472.83	1739013.12	14524530.16	39°59'36.2928"N	80°38'52.6850"W	3590.84	284.730	1.12
9431.00	90.400	336.800	5964.40	2301.73	996.59	-3508.83	1738977.14	14524613.71	39°59'37.1201"N	80°38'53.1433"W	3647.61	285.856	0.64
9521.00	90.400	337.020	5963.77	2391.73	1079.37	-3544.12	1738941.86	14524696.46	39°59'37.9397"N	80°38'53.5925"W	3704.84	286.938	0.24
9612.00	90.550	336.800	5963.02	2482.72	1163.08	-3579.81	1738906.19	14524780.14	39°59'38.7683"N	80°38'54.0468"W	3764.01	287.999	0.29
9702.00	90.550	337.040	5962.16	2572.72	1245.87	-3615.09	1738870.92	14524862.90	39°59'39.5878"N	80°38'54.4959"W	3823.75	289.016	0.27
9793.00	90.490	336.700	5961.33	2663.71	1329.55	-3650.83	1738835.19	14524946.55	39°59'40.4162"N	80°38'54.9509"W	3885.40	290.011	0.38
9884.00	90.280	336.570	5960.72	2754.71	1413.09	-3686.92	1738799.12	14525030.05	39°59'41.2431"N	80°38'55.4104"W	3948.44	290.970	0.27
9975.00	90.520	336.740	5960.08	2845.71	1496.64	-3722.98	1738763.07	14525113.57	39°59'42.0701"N	80°38'55.8695"W	4012.54	291.900	0.32
10066.00	90.550	336.880	5959.23	2936.71	1580.28	-3758.81	1738727.25	14525197.18	39°59'42.8981"N	80°38'56.3257"W	4077.50	292.803	0.16
10157.00	90.490	336.700	5958.41	3027.70	1663.91	-3794.68	1738691.40	14525280.78	39°59'43.7260"N	80°38'56.7822"W	4143.45	293.677	0.21
10247.00	90.490	336.560	5957.64	3117.70	1746.53	-3830.37	1738655.72	14525363.36	39°59'44.5438"N	80°38'57.2367"W	4209.77	294.511	0.16
10338.00	90.770	337.030	5956.64	3208.69	1830.16	-3866.23	1738619.88	14525446.96	39°59'45.3717"N	80°38'57.6932"W	4277.52	295.332	0.60
10428.00	90.550	336.690	5955.60	3298.69	1912.91	-3901.59	1738584.53	14525529.68	39°59'46.1908"N	80°38'58.1434"W	4345.30	296.118	0.45
10518.00	90.490	336.910	5954.78	3388.68	1995.63	-3937.05	1738549.09	14525612.36	39°59'47.0097"N	80°38'58.5947"W	4413.94	296.880	0.25
10610.00	90.520	336.620	5953.97	3480.68	2080.17	-3973.34	1738512.81	14525696.87	39°59'47.8465"N	80°38'59.0568"W	4484.92	297.633	0.32

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Field	Marshall	API	47051018710000
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Slot	401H		

WELLPATH DATA (338 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]
10700.00	90.620	336.850	5953.08	3570.67	2162.85	-4008.89	1738477.28	14525779.51	39°59'48.6649"N	80°38'59.5094"W	4555.11	298.347	0.28
10792.00	89.820	336.540	5952.72	3662.67	2247.34	-4045.28	1738440.89	14525863.97	39°59'49.5013"N	80°38'59.9728"W	4627.62	299.054	0.93
10884.00	90.310	337.010	5952.62	3754.67	2331.88	-4081.56	1738404.63	14525948.48	39°59'50.3382"N	80°39'0.4346"W	4700.73	299.740	0.74
10974.00	90.400	336.920	5952.06	3844.67	2414.70	-4116.78	1738369.43	14526031.27	39°59'51.1580"N	80°39'0.8830"W	4772.70	300.394	0.14
11066.00	90.430	336.750	5951.40	3936.67	2499.29	-4152.97	1738333.25	14526115.82	39°59'51.9953"N	80°39'1.3437"W	4847.02	301.040	0.19
11156.00	90.340	336.970	5950.79	4026.66	2582.04	-4188.34	1738297.90	14526198.55	39°59'52.8145"N	80°39'1.7940"W	4920.27	301.653	0.26
11246.00	90.340	336.960	5950.26	4116.66	2664.86	-4223.55	1738262.70	14526281.34	39°59'53.6343"N	80°39'2.2423"W	4993.99	302.250	0.01
11337.00	90.490	337.590	5949.60	4207.66	2748.80	-4258.70	1738227.56	14526365.24	39°59'54.4651"N	80°39'2.6898"W	5068.77	302.840	0.71
11428.00	90.220	336.250	5949.03	4298.65	2832.51	-4294.38	1738191.90	14526448.92	39°59'55.2938"N	80°39'3.1439"W	5144.39	303.408	1.50
11519.00	90.310	336.840	5948.61	4389.65	2915.99	-4330.60	1738155.69	14526532.36	39°59'56.1201"N	80°39'3.6051"W	5220.83	303.954	0.66
11609.00	90.680	336.590	5947.84	4479.65	2998.66	-4366.17	1738120.13	14526615.00	39°59'56.9384"N	80°39'4.0581"W	5296.74	304.481	0.50
11699.00	90.650	336.770	5946.79	4569.64	3081.30	-4401.80	1738084.52	14526697.61	39°59'57.7565"N	80°39'4.5117"W	5373.10	304.992	0.20
11790.00	90.550	336.870	5945.84	4660.63	3164.95	-4437.62	1738048.72	14526781.22	39°59'58.5845"N	80°39'4.9677"W	5450.63	305.497	0.16
11880.00	90.740	338.020	5944.82	4750.62	3248.06	-4472.13	1738014.21	14526864.30	39°59'59.4072"N	80°39'5.4071"W	5527.19	305.990	1.30
11971.00	90.650	337.810	5943.72	4841.59	3332.37	-4506.35	1737980.01	14526948.58	40°00'0.2417"N	80°39'5.8425"W	5604.63	306.482	0.25
12061.00	90.550	337.840	5942.78	4931.57	3415.71	-4540.31	1737946.06	14527031.89	40°00'1.0666"N	80°39'6.2747"W	5681.68	306.954	0.12
12157.00	90.620	337.950	5941.80	5027.55	3504.65	-4576.44	1737909.95	14527120.79	40°00'1.9469"N	80°39'6.7345"W	5764.23	307.445	0.14
12252.00	90.800	338.200	5940.62	5122.51	3592.77	-4611.91	1737874.49	14527208.88	40°00'2.8191"N	80°39'7.1858"W	5846.17	307.919	0.32
12347.00	90.710	337.740	5939.37	5217.48	3680.83	-4647.54	1737838.88	14527296.90	40°00'3.6907"N	80°39'7.6392"W	5928.58	308.379	0.49
12442.00	90.710	338.020	5938.19	5312.46	3768.83	-4683.31	1737803.12	14527384.87	40°00'4.5617"N	80°39'8.0944"W	6011.44	308.825	0.29
12538.00	90.680	337.910	5937.03	5408.43	3857.81	-4719.32	1737767.12	14527473.82	40°00'5.4425"N	80°39'8.5528"W	6095.46	309.264	0.12
12633.00	90.620	337.780	5935.95	5503.40	3945.79	-4755.14	1737731.31	14527561.76	40°00'6.3133"N	80°39'9.0087"W	6179.05	309.686	0.15
12728.00	90.650	337.720	5934.90	5598.38	4033.71	-4791.11	1737695.36	14527649.65	40°00'7.1835"N	80°39'9.4665"W	6263.03	310.095	0.07
12823.00	90.740	338.030	5933.74	5693.36	4121.71	-4826.89	1737659.59	14527737.61	40°00'8.0545"N	80°39'9.9218"W	6347.23	310.494	0.34
12919.00	90.620	337.800	5932.61	5789.33	4210.66	-4862.98	1737623.52	14527826.53	40°00'8.9349"N	80°39'10.3811"W	6432.59	310.888	0.27
13018.00	90.680	337.740	5931.48	5888.31	4302.30	-4900.43	1737586.08	14527918.13	40°00'9.8419"N	80°39'10.8578"W	6521.04	311.281	0.09
13113.00	90.770	338.070	5930.28	5983.28	4390.31	-4936.16	1737550.36	14528006.11	40°00'10.7131"N	80°39'11.3125"W	6606.10	311.650	0.36
13208.00	90.580	338.080	5929.16	6078.25	4478.44	-4971.63	1737514.91	14528094.20	40°00'11.5853"N	80°39'11.7639"W	6691.30	312.012	0.20
13304.00	90.740	337.950	5928.06	6174.22	4567.45	-5007.57	1737478.98	14528183.18	40°00'12.4664"N	80°39'12.2213"W	6777.71	312.368	0.21
13399.00	90.650	337.880	5926.90	6269.19	4655.47	-5043.29	1737443.28	14528271.17	40°00'13.3376"N	80°39'12.6758"W	6863.54	312.710	0.12



# Actual Wellpath Report

Betty Schafer MSH 401H awp Proj: 31266'  
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13494.00	90.770	338.020	5925.73	6364.16	4743.52	-5078.95	1737407.63	14528359.18	40°00'14.2091"N	80°39'13.1297"W	6949.58	313.044	0.19
13589.00	90.620	337.780	5924.57	6459.13	4831.53	-5114.69	1737371.91	14528447.15	40°00'15.0802"N	80°39'13.5845"W	7035.89	313.369	0.30
13685.00	90.770	337.960	5923.41	6555.11	4920.45	-5150.85	1737335.76	14528536.04	40°00'15.9603"N	80°39'14.0448"W	7123.35	313.689	0.24
13780.00	90.580	337.840	5922.29	6650.08	5008.46	-5186.59	1737300.04	14528624.02	40°00'16.8315"N	80°39'14.4997"W	7210.09	313.999	0.24
13875.00	90.680	337.880	5921.25	6745.06	5096.45	-5222.39	1737264.25	14528711.98	40°00'17.7024"N	80°39'14.9553"W	7297.07	314.301	0.11
13970.00	90.620	337.840	5920.17	6840.03	5184.44	-5258.19	1737228.46	14528799.93	40°00'18.5733"N	80°39'15.4110"W	7384.24	314.595	0.08
14066.00	90.520	337.940	5919.21	6936.01	5273.38	-5294.32	1737192.35	14528888.83	40°00'19.4536"N	80°39'15.8709"W	7472.51	314.886	0.15
14161.00	90.680	337.840	5918.22	7030.98	5361.39	-5330.07	1737156.61	14528976.81	40°00'20.3247"N	80°39'16.3260"W	7560.04	315.168	0.20
14256.00	90.580	337.530	5917.17	7125.96	5449.27	-5366.14	1737120.55	14529064.65	40°00'21.1945"N	80°39'16.7851"W	7647.88	315.440	0.34
14351.00	90.580	337.830	5916.21	7220.94	5537.15	-5402.22	1737084.49	14529152.50	40°00'22.0643"N	80°39'17.2443"W	7735.89	315.707	0.32
14446.00	90.620	338.000	5915.22	7315.92	5625.17	-5437.94	1737048.79	14529240.49	40°00'22.9356"N	80°39'17.6989"W	7823.92	315.970	0.18
14542.00	90.620	338.030	5914.18	7411.89	5714.19	-5473.87	1737012.86	14529329.47	40°00'23.8166"N	80°39'18.1563"W	7912.98	316.230	0.03
14637.00	90.650	337.940	5913.13	7506.86	5802.25	-5509.48	1736977.27	14529417.50	40°00'24.6883"N	80°39'18.6095"W	8001.28	316.483	0.10
14732.00	90.580	337.900	5912.11	7601.83	5890.28	-5545.19	1736941.57	14529505.49	40°00'25.5595"N	80°39'19.0640"W	8089.78	316.729	0.08
14827.00	90.680	337.790	5911.06	7696.81	5978.26	-5581.01	1736905.76	14529593.44	40°00'26.4303"N	80°39'19.5200"W	8178.47	316.968	0.16
14923.00	90.430	337.880	5910.13	7792.79	6067.16	-5617.23	1736869.56	14529682.31	40°00'27.3103"N	80°39'19.9810"W	8268.24	317.205	0.28
15018.00	90.620	338.000	5909.26	7887.76	6155.20	-5652.91	1736833.90	14529770.31	40°00'28.1817"N	80°39'20.4352"W	8357.15	317.436	0.24
15113.00	90.490	337.810	5908.34	7982.74	6243.22	-5688.64	1736798.18	14529858.30	40°00'29.0529"N	80°39'20.8900"W	8446.21	317.661	0.24
15208.00	90.550	338.030	5907.48	8077.71	6331.25	-5724.35	1736762.48	14529946.29	40°00'29.9242"N	80°39'21.3445"W	8535.39	317.882	0.24
15304.00	90.520	337.890	5906.58	8173.69	6420.23	-5760.37	1736726.47	14530035.24	40°00'30.8049"N	80°39'21.8030"W	8625.62	318.101	0.15
15399.00	90.460	337.820	5905.77	8268.67	6508.22	-5796.18	1736690.68	14530123.19	40°00'31.6758"N	80°39'22.2589"W	8715.08	318.312	0.10
15494.00	90.520	338.170	5904.96	8363.64	6596.30	-5831.78	1736655.10	14530211.24	40°00'32.5475"N	80°39'22.7119"W	8804.59	318.520	0.37
15589.00	90.460	337.880	5904.14	8458.61	6684.39	-5867.32	1736619.57	14530299.30	40°00'33.4194"N	80°39'23.1644"W	8894.19	318.724	0.31
15686.00	90.490	337.930	5903.34	8555.59	6774.27	-5903.81	1736583.09	14530389.13	40°00'34.3090"N	80°39'23.6288"W	8985.86	318.928	0.06
15782.00	90.490	337.820	5902.52	8651.56	6863.19	-5939.96	1736546.95	14530478.03	40°00'35.1892"N	80°39'24.0891"W	9076.71	319.124	0.11
15878.00	90.520	337.990	5901.67	8747.54	6952.14	-5976.07	1736510.86	14530566.94	40°00'36.0695"N	80°39'24.5487"W	9167.64	319.318	0.18
15975.00	90.550	338.100	5900.77	8844.51	7042.10	-6012.34	1736474.61	14530656.86	40°00'36.9599"N	80°39'25.0103"W	9259.56	319.510	0.12
16071.00	90.550	337.170	5899.85	8940.49	7130.88	-6048.86	1736438.10	14530745.60	40°00'37.8386"N	80°39'25.4753"W	9350.84	319.693	0.97
16167.00	90.490	337.030	5898.97	9036.49	7219.31	-6086.22	1736400.76	14530834.00	40°00'38.7139"N	80°39'25.9510"W	9442.48	319.868	0.16
16262.00	90.490	336.480	5898.16	9131.48	7306.59	-6123.71	1736363.28	14530921.25	40°00'39.5779"N	80°39'26.4285"W	9533.42	320.033	0.58





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REFERENCE WELLPATH IDENTIFICATION			
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Field	Marshall	API	47051018710000
Facility	Betty Schafer MSH Pad	Wellbore	Betty Schafer MSH 401H AWB
Slot	401H		

WELLPATH DATA (338 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]
16357.00	90.520	335.810	5897.32	9226.47	7393.47	-6162.13	1736324.88	14531008.10	40°00'40.4379"N	80°39'26.9180"W	9624.72	320.190	0.71
16453.00	90.460	335.740	5896.50	9322.46	7481.01	-6201.52	1736285.50	14531095.61	40°00'41.3046"N	80°39'27.4199"W	9717.22	320.342	0.10
16548.00	90.490	335.760	5895.72	9417.44	7567.63	-6240.53	1736246.50	14531182.19	40°00'42.1620"N	80°39'27.9170"W	9808.84	320.490	0.04
16643.00	90.520	335.720	5894.88	9512.42	7654.24	-6279.57	1736207.48	14531268.76	40°00'43.0193"N	80°39'28.4144"W	9900.52	320.634	0.05
16738.00	90.520	335.960	5894.02	9607.41	7740.91	-6318.45	1736168.62	14531355.40	40°00'43.8773"N	80°39'28.9098"W	9992.22	320.777	0.25
16834.00	90.460	335.730	5893.20	9703.39	7828.50	-6357.73	1736129.35	14531442.96	40°00'44.7444"N	80°39'29.4103"W	10084.95	320.919	0.25
16929.00	90.550	335.980	5892.36	9798.38	7915.19	-6396.59	1736090.51	14531529.61	40°00'45.6026"N	80°39'29.9055"W	10176.76	321.057	0.28
17024.00	90.620	336.500	5891.39	9893.37	8002.13	-6434.86	1736052.25	14531616.52	40°00'46.4632"N	80°39'30.3931"W	10268.47	321.196	0.55
17120.00	90.430	335.800	5890.51	9989.36	8089.93	-6473.67	1736013.45	14531704.28	40°00'47.3323"N	80°39'30.8876"W	10361.25	321.333	0.76
17215.00	90.460	335.810	5889.77	10084.34	8176.58	-6512.61	1735974.53	14531790.90	40°00'48.1901"N	80°39'31.3837"W	10453.26	321.463	0.03
17310.00	90.520	335.850	5888.96	10179.33	8263.25	-6551.50	1735935.65	14531877.54	40°00'49.0481"N	80°39'31.8793"W	10545.31	321.591	0.08
17405.00	90.650	336.360	5887.99	10274.32	8350.10	-6589.98	1735897.19	14531964.35	40°00'49.9078"N	80°39'32.3696"W	10637.30	321.719	0.55
17500.00	90.620	336.020	5886.94	10369.31	8437.01	-6628.33	1735858.85	14532051.23	40°00'50.7681"N	80°39'32.8582"W	10729.30	321.846	0.36
17596.00	90.580	336.160	5885.93	10465.30	8524.77	-6667.24	1735819.96	14532138.95	40°00'51.6368"N	80°39'33.3539"W	10822.37	321.971	0.15
17691.00	90.580	335.780	5884.97	10560.28	8611.53	-6705.92	1735781.29	14532225.68	40°00'52.4957"N	80°39'33.8468"W	10914.57	322.092	0.40
17786.00	90.620	335.830	5883.97	10655.27	8698.18	-6744.86	1735742.37	14532312.30	40°00'53.3534"N	80°39'34.3430"W	11006.88	322.209	0.07
17882.00	90.650	335.920	5882.91	10751.25	8785.79	-6784.09	1735703.15	14532399.87	40°00'54.2207"N	80°39'34.8429"W	11100.18	322.326	0.10
17977.00	90.710	335.920	5881.78	10846.23	8872.52	-6822.85	1735664.41	14532486.56	40°00'55.0792"N	80°39'35.3368"W	11192.53	322.440	0.06
18072.00	90.580	335.930	5880.71	10941.22	8959.25	-6861.60	1735625.68	14532573.26	40°00'55.9378"N	80°39'35.8306"W	11284.93	322.553	0.14
18167.00	90.520	335.720	5879.80	11036.20	9045.91	-6900.50	1735586.79	14532659.89	40°00'56.7957"N	80°39'36.3264"W	11377.41	322.662	0.23
18263.00	90.680	336.810	5878.80	11132.19	9133.78	-6939.14	1735548.16	14532747.73	40°00'57.6655"N	80°39'36.8186"W	11470.73	322.775	1.15
18358.00	90.620	336.970	5877.72	11227.18	9221.16	-6976.43	1735510.89	14532835.07	40°00'58.5304"N	80°39'37.2936"W	11562.88	322.890	0.18
18453.00	90.580	336.940	5876.72	11322.18	9308.57	-7013.61	1735473.72	14532922.45	40°00'59.3956"N	80°39'37.7672"W	11655.05	323.004	0.05
18548.00	90.520	336.820	5875.81	11417.17	9395.94	-7050.91	1735436.44	14533009.78	40°01'0.2604"N	80°39'38.2424"W	11747.30	323.115	0.14
18644.00	90.310	336.750	5875.12	11513.17	9484.16	-7088.75	1735398.61	14533097.97	40°01'1.1337"N	80°39'38.7244"W	11840.60	323.224	0.23
18739.00	90.250	336.420	5874.65	11608.17	9571.34	-7126.51	1735360.87	14533185.11	40°01'1.9966"N	80°39'39.2054"W	11933.04	323.330	0.35
18834.00	90.310	336.720	5874.19	11703.17	9658.50	-7164.28	1735323.11	14533272.24	40°01'2.8594"N	80°39'39.6866"W	12025.54	323.433	0.32
18929.00	90.310	336.600	5873.67	11798.17	9745.73	-7201.92	1735285.49	14533359.43	40°01'3.7228"N	80°39'40.1661"W	12118.04	323.536	0.13
19024.00	90.460	337.010	5873.04	11893.16	9833.05	-7239.33	1735248.09	14533446.72	40°01'4.5871"N	80°39'40.6427"W	12210.52	323.639	0.46
19120.00	90.430	337.160	5872.29	11989.16	9921.47	-7276.71	1735210.73	14533535.11	40°01'5.4623"N	80°39'41.1188"W	12303.90	323.743	0.16



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REFERENCE WELLPATH IDENTIFICATION			
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Facility	Betty Schafer MSH Pad	Wellbore	Betty Schafer MSH 401H AWB
Slot	401H		

WELLPATH DATA (338 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]
19215.00	90.460	337.110	5871.55	12084.15	10009.00	-7313.62	1735173.83	14533622.60	40°01'6.3287"N	80°39'41.5890"W	12396.34	323.844	0.06
19310.00	90.400	336.830	5870.84	12179.15	10096.43	-7350.79	1735136.68	14533710.00	40°01'7.1940"N	80°39'42.0624"W	12488.87	323.943	0.30
19405.00	90.460	337.070	5870.13	12274.15	10183.84	-7387.98	1735099.50	14533797.38	40°01'8.0593"N	80°39'42.5362"W	12581.45	324.041	0.26
19501.00	90.550	336.950	5869.28	12370.14	10272.21	-7425.48	1735062.02	14533885.71	40°01'8.9340"N	80°39'43.0138"W	12675.01	324.138	0.16
19596.00	90.490	336.870	5868.42	12465.14	10359.60	-7462.73	1735024.78	14533973.06	40°01'9.7990"N	80°39'43.4884"W	12767.68	324.232	0.11
19691.00	90.620	337.070	5867.50	12560.13	10447.02	-7499.89	1734987.63	14534060.45	40°01'10.6643"N	80°39'43.9618"W	12860.35	324.326	0.25
19786.00	90.460	337.500	5866.60	12655.12	10534.65	-7536.58	1734950.96	14534148.05	40°01'11.5316"N	80°39'44.4290"W	12952.94	324.420	0.48
19881.00	90.580	337.080	5865.74	12750.11	10622.28	-7573.25	1734914.30	14534235.64	40°01'12.3990"N	80°39'44.8961"W	13045.57	324.513	0.46
19977.00	90.460	337.040	5864.87	12846.11	10710.68	-7610.67	1734876.90	14534324.01	40°01'13.2740"N	80°39'45.3727"W	13139.29	324.604	0.13
20072.00	90.310	336.650	5864.23	12941.11	10798.03	-7648.02	1734839.56	14534411.33	40°01'14.1386"N	80°39'45.8486"W	13232.14	324.691	0.44
20167.00	90.520	337.060	5863.54	13036.10	10885.38	-7685.36	1734802.24	14534498.64	40°01'15.0032"N	80°39'46.3243"W	13325.02	324.777	0.48
20263.00	90.580	336.930	5862.62	13132.10	10973.74	-7722.88	1734764.73	14534586.97	40°01'15.8778"N	80°39'46.8022"W	13418.86	324.864	0.15
20358.00	90.400	336.780	5861.81	13227.09	11061.09	-7760.22	1734727.41	14534674.29	40°01'16.7424"N	80°39'47.2779"W	13511.80	324.947	0.25
20453.00	90.400	336.910	5861.14	13322.09	11148.44	-7797.57	1734690.07	14534761.60	40°01'17.6070"N	80°39'47.7538"W	13604.77	325.030	0.14
20548.00	90.770	336.930	5860.17	13417.09	11235.83	-7834.81	1734652.84	14534848.95	40°01'18.4720"N	80°39'48.2282"W	13697.74	325.112	0.39
20644.00	90.920	337.250	5858.76	13513.07	11324.24	-7872.18	1734615.49	14534937.34	40°01'19.3472"N	80°39'48.7043"W	13791.65	325.194	0.37
20739.00	90.830	337.010	5857.31	13608.06	11411.77	-7909.10	1734578.59	14535024.82	40°01'20.2134"N	80°39'49.1745"W	13884.60	325.276	0.27
20834.00	90.710	336.730	5856.03	13703.05	11499.12	-7946.41	1734541.29	14535112.15	40°01'21.0781"N	80°39'49.6499"W	13977.67	325.354	0.32
20929.00	90.710	336.720	5854.85	13798.04	11586.38	-7983.95	1734503.77	14535199.37	40°01'21.9418"N	80°39'50.1282"W	14070.81	325.430	0.01
21025.00	90.710	336.030	5853.66	13894.03	11674.33	-8022.41	1734465.31	14535287.29	40°01'22.8124"N	80°39'50.6184"W	14165.07	325.504	0.72
21120.00	90.680	336.790	5852.51	13989.03	11761.38	-8060.43	1734427.31	14535374.31	40°01'23.6741"N	80°39'51.1028"W	14258.35	325.576	0.80
21215.00	90.620	336.740	5851.43	14084.02	11848.67	-8097.90	1734389.85	14535461.56	40°01'24.5381"N	80°39'51.5803"W	14351.55	325.650	0.08
21310.00	90.650	336.700	5850.38	14179.01	11935.93	-8135.45	1734352.32	14535548.79	40°01'25.4018"N	80°39'52.0586"W	14444.79	325.722	0.05
21406.00	90.740	336.810	5849.22	14275.01	12024.13	-8173.33	1734314.45	14535636.95	40°01'26.2749"N	80°39'52.5413"W	14539.02	325.794	0.15
21501.00	90.680	336.900	5848.04	14370.00	12111.48	-8210.67	1734277.13	14535724.27	40°01'27.1394"N	80°39'53.0171"W	14632.26	325.866	0.11
21596.00	90.680	336.930	5846.91	14464.99	12198.87	-8247.92	1734239.90	14535811.62	40°01'28.0044"N	80°39'53.4916"W	14725.51	325.937	0.03
21691.00	90.580	336.670	5845.87	14559.99	12286.18	-8285.34	1734202.49	14535898.90	40°01'28.8686"N	80°39'53.9684"W	14818.81	326.006	0.29
21787.00	90.620	336.640	5844.86	14655.98	12374.32	-8323.38	1734164.47	14535987.00	40°01'29.7410"N	80°39'54.4531"W	14913.16	326.074	0.05
21882.00	90.740	336.930	5843.74	14750.97	12461.62	-8360.82	1734127.04	14536074.27	40°01'30.6051"N	80°39'54.9302"W	15006.51	326.141	0.33
21977.00	90.740	336.840	5842.51	14845.96	12548.98	-8398.12	1734089.76	14536161.60	40°01'31.4699"N	80°39'55.4054"W	15099.85	326.209	0.09



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22072.00	90.580	336.230	5841.41	14940.96	12636.12	-8435.94	1734051.95	14536248.70	40°01'32.3324"N	80°39'55.8874"W	15193.31	326.273	0.66
22167.00	90.890	337.140	5840.20	15035.95	12723.36	-8473.54	1734014.37	14536335.90	40°01'33.1959"N	80°39'56.3664"W	15286.75	326.337	1.01
22263.00	90.740	336.990	5838.83	15131.94	12811.76	-8510.94	1733976.98	14536424.27	40°01'34.0709"N	80°39'56.8430"W	15381.07	326.404	0.22
22358.00	90.710	336.890	5837.63	15226.93	12899.16	-8548.15	1733939.78	14536511.64	40°01'34.9360"N	80°39'57.3171"W	15474.47	326.468	0.11
22453.00	90.740	336.930	5836.43	15321.92	12986.54	-8585.41	1733902.54	14536598.99	40°01'35.8009"N	80°39'57.7918"W	15567.90	326.531	0.05
22548.00	90.650	336.810	5835.27	15416.91	13073.90	-8622.72	1733865.24	14536686.31	40°01'36.6656"N	80°39'58.2672"W	15661.36	326.594	0.16
22644.00	90.680	336.810	5834.16	15512.91	13162.14	-8660.52	1733827.46	14536774.51	40°01'37.5389"N	80°39'58.7489"W	15755.84	326.656	0.03
22739.00	90.680	337.000	5833.03	15607.90	13249.52	-8697.78	1733790.21	14536861.86	40°01'38.4038"N	80°39'59.2237"W	15849.33	326.717	0.20
22834.00	90.620	336.400	5831.95	15702.89	13336.76	-8735.36	1733752.65	14536949.07	40°01'39.2674"N	80°39'59.7025"W	15942.89	326.776	0.63
22930.00	90.520	336.730	5831.00	15798.89	13424.84	-8773.54	1733714.49	14537037.11	40°01'40.1392"N	80°40'0.1890"W	16037.50	326.834	0.36
23025.00	90.550	336.410	5830.11	15893.88	13512.00	-8811.31	1733676.73	14537124.24	40°01'41.0020"N	80°40'0.6704"W	16131.13	326.891	0.34
23120.00	90.490	336.860	5829.25	15988.88	13599.21	-8848.98	1733639.07	14537211.42	40°01'41.8652"N	80°40'1.1505"W	16224.76	326.948	0.48
23215.00	90.460	336.890	5828.46	16083.88	13686.57	-8886.29	1733601.78	14537298.74	40°01'42.7299"N	80°40'1.6259"W	16318.35	327.006	0.04
23311.00	90.580	336.850	5827.59	16179.87	13774.85	-8924.00	1733564.08	14537386.99	40°01'43.6037"N	80°40'2.1064"W	16412.93	327.063	0.13
23406.00	90.550	336.950	5826.65	16274.87	13862.23	-8961.27	1733526.83	14537474.33	40°01'44.4685"N	80°40'2.5813"W	16506.54	327.119	0.11
23501.00	90.580	336.180	5825.72	16369.86	13949.39	-8999.05	1733489.06	14537561.46	40°01'45.3313"N	80°40'3.0628"W	16600.25	327.173	0.81
23597.00	90.520	333.820	5824.80	16465.81	14036.39	-9039.62	1733448.51	14537648.42	40°01'46.1925"N	80°40'3.5801"W	16695.35	327.218	2.46
23692.00	90.620	333.740	5823.85	16560.67	14121.61	-9081.59	1733406.55	14537733.61	40°01'47.0362"N	80°40'4.1156"W	16789.73	327.255	0.13
23787.00	90.580	333.890	5822.86	16655.55	14206.85	-9123.51	1733364.65	14537818.82	40°01'47.8801"N	80°40'4.6503"W	16884.11	327.292	0.16
23882.00	90.550	333.740	5821.92	16750.42	14292.10	-9165.42	1733322.75	14537904.03	40°01'48.7241"N	80°40'5.1851"W	16978.49	327.328	0.16
23978.00	90.620	333.970	5820.94	16846.29	14378.27	-9207.72	1733280.47	14537990.17	40°01'49.5772"N	80°40'5.7248"W	17073.87	327.365	0.25
24073.00	90.520	333.840	5819.99	16941.17	14463.58	-9249.51	1733238.70	14538075.45	40°01'50.4219"N	80°40'6.2579"W	17168.25	327.401	0.17
24168.00	90.550	333.970	5819.11	17036.05	14548.90	-9291.29	1733196.93	14538160.73	40°01'51.2665"N	80°40'6.7909"W	17262.63	327.437	0.14
24263.00	90.620	334.830	5818.14	17130.97	14634.57	-9332.34	1733155.90	14538246.37	40°01'52.1146"N	80°40'7.3145"W	17356.93	327.475	0.91
24359.00	90.580	336.220	5817.13	17226.94	14721.93	-9372.11	1733116.15	14538333.70	40°01'52.9794"N	80°40'7.8216"W	17451.98	327.519	1.45
24454.00	90.650	335.900	5816.11	17321.93	14808.75	-9410.66	1733077.62	14538420.49	40°01'53.8388"N	80°40'8.3130"W	17545.93	327.565	0.34
24549.00	90.770	335.880	5814.93	17416.91	14895.46	-9449.46	1733038.83	14538507.16	40°01'54.6971"N	80°40'8.8077"W	17639.93	327.610	0.13
24644.00	90.680	335.740	5813.73	17511.89	14982.11	-9488.38	1732999.92	14538593.78	40°01'55.5548"N	80°40'9.3039"W	17733.95	327.653	0.18
24740.00	90.580	335.920	5812.68	17607.87	15069.69	-9527.69	1732960.63	14538681.32	40°01'56.4217"N	80°40'9.8050"W	17828.98	327.697	0.21
24835.00	90.580	335.780	5811.72	17702.86	15156.37	-9566.55	1732921.78	14538767.97	40°01'57.2798"N	80°40'10.3005"W	17923.02	327.740	0.15



# Actual Wellpath Report

Betty Schafer MSH 401H awp Proj: 31266'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Betty Schafer MSH 401H
Field	Marshall	API	47051018710000
Facility	Betty Schafer MSH Pad	Wellbore	Betty Schafer MSH 401H AWB
Slot	401H		

WELLPATH DATA (338 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]
24930.00	90.710	335.900	5810.65	17797.84	15243.04	-9605.43	1732882.91	14538854.61	40°01'58.1377"N	80°40'10.7962"W	18017.07	327.783	0.19
25025.00	90.620	335.880	5809.54	17892.82	15329.75	-9644.24	1732844.13	14538941.28	40°01'58.9960"N	80°40'11.2909"W	18111.12	327.825	0.10
25121.00	90.580	335.970	5808.54	17988.81	15417.39	-9683.40	1732804.98	14539028.89	40°01'59.8635"N	80°40'11.7902"W	18206.16	327.868	0.10
25216.00	90.550	335.380	5807.60	18083.79	15503.96	-9722.53	1732765.87	14539115.42	40°02'0.7204"N	80°40'12.2891"W	18300.28	327.908	0.62
25311.00	90.770	333.980	5806.51	18178.72	15589.82	-9763.15	1732725.26	14539201.25	40°02'1.5704"N	80°40'12.8073"W	18394.61	327.943	1.49
25406.00	90.860	335.640	5805.16	18273.65	15675.78	-9803.58	1732684.84	14539287.17	40°02'2.4213"N	80°40'13.3229"W	18488.92	327.978	1.75
25502.00	90.950	336.890	5803.64	18369.63	15763.64	-9842.21	1732646.22	14539375.00	40°02'3.2911"N	80°40'13.8155"W	18583.91	328.021	1.31
25597.00	90.890	336.660	5802.11	18464.62	15850.93	-9879.67	1732608.78	14539462.26	40°02'4.1551"N	80°40'14.2929"W	18677.79	328.065	0.25
25692.00	90.830	336.040	5800.69	18559.61	15937.94	-9917.78	1732570.69	14539549.24	40°02'5.0163"N	80°40'14.7786"W	18771.80	328.107	0.66
25787.00	90.740	335.950	5799.39	18654.59	16024.72	-9956.42	1732532.06	14539635.98	40°02'5.8753"N	80°40'15.2713"W	18865.89	328.147	0.13
25883.00	90.650	335.950	5798.22	18750.58	16112.38	-9995.54	1732492.96	14539723.60	40°02'6.7430"N	80°40'15.7701"W	18961.00	328.186	0.09
25978.00	90.860	335.980	5796.97	18845.56	16199.14	-10034.23	1732454.28	14539810.33	40°02'7.6017"N	80°40'16.2633"W	19055.12	328.225	0.22
26073.00	90.860	335.920	5795.54	18940.54	16285.88	-10072.94	1732415.59	14539897.04	40°02'8.4603"N	80°40'16.7569"W	19149.26	328.263	0.06
26168.00	90.830	335.870	5794.14	19035.52	16372.58	-10111.74	1732376.81	14539983.71	40°02'9.3186"N	80°40'17.2516"W	19243.41	328.300	0.06
26264.00	90.830	335.670	5792.75	19131.50	16460.12	-10151.13	1732337.43	14540071.21	40°02'10.1851"N	80°40'17.7539"W	19338.59	328.337	0.21
26359.00	91.450	337.570	5790.86	19226.47	16547.30	-10188.82	1732299.75	14540158.35	40°02'11.0479"N	80°40'18.2343"W	19432.58	328.378	2.10
26454.00	90.710	336.890	5789.07	19321.45	16634.88	-10225.58	1732263.01	14540245.90	40°02'11.9148"N	80°40'18.7028"W	19526.43	328.421	1.06
26549.00	91.080	336.800	5787.59	19416.44	16722.21	-10262.93	1732225.67	14540333.20	40°02'12.7792"N	80°40'19.1788"W	19620.40	328.461	0.40
26645.00	91.110	337.060	5785.75	19512.42	16810.52	-10300.54	1732188.07	14540421.47	40°02'13.6532"N	80°40'19.6582"W	19715.34	328.502	0.27
26742.00	91.050	336.880	5783.93	19609.40	16899.77	-10338.49	1732150.15	14540510.69	40°02'14.5366"N	80°40'20.1418"W	19811.27	328.544	0.20
26837.00	91.140	337.050	5782.11	19704.38	16987.18	-10375.65	1732113.00	14540598.07	40°02'15.4018"N	80°40'20.6155"W	19905.24	328.584	0.20
26934.00	91.390	336.850	5779.97	19801.36	17076.42	-10413.62	1732075.04	14540687.26	40°02'16.2850"N	80°40'21.0994"W	20001.19	328.624	0.33
27031.00	91.690	336.290	5777.36	19898.32	17165.38	-10452.18	1732036.50	14540776.20	40°02'17.1656"N	80°40'21.5909"W	20097.22	328.662	0.65
27127.00	91.720	337.270	5774.51	19994.28	17253.57	-10490.01	1731998.68	14540864.35	40°02'18.0384"N	80°40'22.0731"W	20192.22	328.701	1.02
27223.00	91.480	336.880	5771.82	20090.24	17341.95	-10527.39	1731961.32	14540952.70	40°02'18.9132"N	80°40'22.5495"W	20287.17	328.740	0.48
27320.00	91.420	337.080	5769.37	20187.21	17431.20	-10565.31	1731923.41	14541041.91	40°02'19.7965"N	80°40'23.0329"W	20383.14	328.779	0.22
27416.00	91.260	336.800	5767.13	20283.18	17519.50	-10602.90	1731885.84	14541130.18	40°02'20.6705"N	80°40'23.5120"W	20478.15	328.817	0.34
27513.00	91.170	336.510	5765.07	20380.16	17608.54	-10641.33	1731847.42	14541219.18	40°02'21.5518"N	80°40'24.0019"W	20574.22	328.854	0.31
27609.00	91.320	332.810	5762.98	20476.06	17695.27	-10682.40	1731806.37	14541305.88	40°02'22.4104"N	80°40'24.5258"W	20669.69	328.881	3.86
27705.00	90.960	336.320	5761.07	20571.95	17781.93	-10723.62	1731765.17	14541392.51	40°02'23.2683"N	80°40'25.0517"W	20765.19	328.907	3.67

REFERENCE WELLPATH IDENTIFICATION			
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Field	Marshall	API	47051018710000
Facility	Betty Schafer MSH Pad	Wellbore	Betty Schafer MSH 401H AWB
Slot	401H		

WELLPATH DATA (338 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]
27800.00	90.920	336.260	5759.51	20666.94	17868.90	-10761.81	1731726.99	14541479.44	40°02'24.1292"N	80°40'25.5387"W	20859.39	328.941	0.08
27895.00	90.980	336.040	5757.94	20761.92	17955.78	-10800.22	1731688.59	14541566.29	40°02'24.9891"N	80°40'26.0284"W	20953.63	328.974	0.24
27991.00	90.920	336.040	5756.35	20857.90	18043.49	-10839.20	1731649.63	14541653.97	40°02'25.8573"N	80°40'26.5254"W	21048.89	329.006	0.06
28086.00	90.950	335.880	5754.80	20952.88	18130.24	-10877.89	1731610.95	14541740.68	40°02'26.7160"N	80°40'27.0188"W	21143.19	329.037	0.17
28181.00	90.890	336.000	5753.27	21047.86	18216.98	-10916.62	1731572.24	14541827.38	40°02'27.5745"N	80°40'27.5127"W	21237.49	329.068	0.14
28276.00	90.920	336.020	5751.77	21142.84	18303.76	-10955.24	1731533.63	14541914.13	40°02'28.4335"N	80°40'28.0051"W	21331.78	329.098	0.04
28372.00	91.050	335.870	5750.12	21238.82	18391.41	-10994.36	1731494.52	14542001.75	40°02'29.3011"N	80°40'28.5041"W	21427.09	329.129	0.21
28467.00	91.050	336.140	5748.38	21333.79	18478.19	-11032.99	1731455.91	14542088.49	40°02'30.1600"N	80°40'28.9966"W	21521.39	329.159	0.28
28562.00	90.990	336.220	5746.69	21428.77	18565.08	-11071.35	1731417.57	14542175.35	40°02'31.0201"N	80°40'29.4858"W	21615.67	329.190	0.11
28657.00	91.020	336.270	5745.02	21523.75	18652.02	-11109.61	1731379.32	14542262.25	40°02'31.8806"N	80°40'29.9736"W	21709.94	329.221	0.06
28752.00	90.890	335.750	5743.44	21618.73	18738.80	-11148.23	1731340.72	14542349.00	40°02'32.7396"N	80°40'30.4661"W	21804.26	329.250	0.56
28848.00	90.950	335.880	5741.90	21714.71	18826.36	-11187.56	1731301.41	14542436.53	40°02'33.6063"N	80°40'30.9676"W	21899.62	329.279	0.15
28943.00	90.890	335.780	5740.37	21809.68	18913.02	-11226.45	1731262.53	14542523.16	40°02'34.4641"N	80°40'31.4636"W	21993.99	329.307	0.12
29038.00	91.020	336.100	5738.79	21904.66	18999.76	-11265.18	1731223.82	14542609.86	40°02'35.3227"N	80°40'31.9575"W	22088.34	329.336	0.36
29133.00	90.890	335.900	5737.20	21999.64	19086.53	-11303.81	1731185.20	14542696.60	40°02'36.1816"N	80°40'32.4502"W	22182.69	329.364	0.25
29229.00	90.920	335.840	5735.69	22095.62	19174.13	-11343.05	1731145.97	14542784.16	40°02'37.0487"N	80°40'32.9506"W	22278.06	329.392	0.07
29324.00	90.960	336.020	5734.13	22190.60	19260.86	-11381.79	1731107.25	14542870.86	40°02'37.9071"N	80°40'33.4447"W	22372.44	329.420	0.19
29419.00	90.920	335.900	5732.57	22285.57	19347.61	-11420.49	1731068.57	14542957.57	40°02'38.7658"N	80°40'33.9382"W	22466.81	329.448	0.13
29515.00	91.020	335.270	5730.95	22381.54	19435.01	-11460.16	1731028.91	14543044.94	40°02'39.6309"N	80°40'34.4442"W	22562.25	329.474	0.66
29610.00	90.770	335.870	5729.46	22476.51	19521.49	-11499.45	1730989.64	14543131.39	40°02'40.4870"N	80°40'34.9453"W	22656.70	329.499	0.68
29707.00	90.770	335.950	5728.16	22573.49	19610.04	-11539.04	1730950.06	14543219.90	40°02'41.3634"N	80°40'35.4502"W	22753.09	329.526	0.08
29802.00	90.860	336.230	5726.81	22668.48	19696.88	-11577.54	1730911.58	14543306.70	40°02'42.2230"N	80°40'35.9412"W	22847.46	329.554	0.31
29897.00	91.050	335.950	5725.22	22763.46	19783.71	-11616.03	1730873.10	14543393.50	40°02'43.0825"N	80°40'36.4321"W	22941.83	329.581	0.36
29992.00	90.890	336.070	5723.62	22858.44	19870.49	-11654.65	1730834.49	14543480.25	40°02'43.9414"N	80°40'36.9247"W	23036.22	329.607	0.21
30088.00	90.950	336.110	5722.07	22954.42	19958.24	-11693.56	1730795.60	14543567.97	40°02'44.8100"N	80°40'37.4208"W	23131.60	329.634	0.08
30278.00	90.860	335.830	5719.07	23144.38	20131.75	-11770.92	1730718.27	14543741.41	40°02'46.5274"N	80°40'38.4074"W	23320.42	329.685	0.15
30374.00	90.620	335.870	5717.83	23240.36	20219.34	-11810.19	1730679.02	14543828.97	40°02'47.3944"N	80°40'38.9083"W	23415.86	329.711	0.25
30469.00	90.680	335.710	5716.76	23335.34	20305.98	-11849.15	1730640.08	14543915.57	40°02'48.2520"N	80°40'39.4052"W	23510.32	329.735	0.18
30564.00	89.850	333.570	5716.32	23430.27	20391.82	-11889.83	1730599.41	14544001.38	40°02'49.1017"N	80°40'39.9244"W	23604.97	329.755	2.42
30660.00	90.580	335.820	5715.96	23526.20	20478.60	-11930.86	1730558.39	14544088.13	40°02'49.9608"N	80°40'40.4479"W	23700.61	329.775	2.46



# Actual Wellpath Report

Betty Schafer MSH 401H awp Proj: 31266'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Betty Schafer MSH 401H
Field	Marshall	API	47051018710000
Facility	Betty Schafer MSH Pad	Wellbore	Betty Schafer MSH 401H AWB
Slot	401H		

WELLPATH DATA (338 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]
30755.00	90.180	335.980	5715.33	23621.19	20565.32	-11969.65	1730519.62	14544174.81	40°02'50.8191"N	80°40'40.9427"W	23795.06	329.799	0.45
30850.00	90.520	337.800	5714.75	23716.18	20652.69	-12006.94	1730482.34	14544262.15	40°02'51.6839"N	80°40'41.4180"W	23889.33	329.827	1.95
30945.00	90.250	337.740	5714.11	23811.16	20740.63	-12042.88	1730446.42	14544350.05	40°02'52.5542"N	80°40'41.8761"W	23983.42	329.859	0.29
31041.00	90.520	337.930	5713.46	23907.14	20829.53	-12079.10	1730410.22	14544438.92	40°02'53.4340"N	80°40'42.3377"W	24078.50	329.890	0.34
31136.00	90.250	337.850	5712.82	24002.12	20917.54	-12114.85	1730374.47	14544526.89	40°02'54.3051"N	80°40'42.7934"W	24172.57	329.922	0.30
31231.00	90.460	337.710	5712.24	24097.10	21005.49	-12150.78	1730338.56	14544614.80	40°02'55.1754"N	80°40'43.2512"W	24266.68	329.952	0.27
31241.00	90.460	337.630	5712.15	24107.10	21014.74	-12154.58	1730334.76	14544624.05	40°02'55.2670"N	80°40'43.2996"W	24276.59	329.956	0.80
31266.00‡	90.460	337.630	5711.95	24132.10	21037.86	-12164.09	1730325.25	14544647.16	40°02'55.4958"N	80°40'43.4209"W	24301.37	329.963	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Betty Schafer MSH 401H AWB    Ref Wellpath: Betty Schafer MSH 401H awp Proj: 31266'									
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]
13.375in Casing	26.00	411.00	385.00	26.00	411.00	0.00	0.00	-0.19	-0.42
9.625in Casing	26.00	1683.00	1657.00	26.00	1626.73	0.00	0.00	-206.96	-195.28
5.5in Casing	26.00	31266.00	31240.00	26.00	5711.95	0.00	0.00	21037.86	-12164.09



# Actual Wellpath Report

Betty Schafer MSH 401H awp Proj: 31266'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Betty Schafer MSH 401H
Field	Marshall	API	47051018710000
Facility	Betty Schafer MSH Pad	Wellbore	Betty Schafer MSH 401H AWB
Slot	401H		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Betty Schafer MSH 401H BHL Rev 7	5696.00	21039.98	-12159.85	1730329.49	14544649.29	40°02'55.5167"N	80°40'43.3663"W	point
Betty Schafer MSH 401H WP3 r1	5831.00	14004.27	-9059.49	1733428.64	14537616.32	40°01'45.8758"N	80°40'3.8372"W	point
Betty Schafer MSH 401H WP2 r2	5843.00	12837.20	-8517.44	1733970.48	14536449.70	40°01'34.3225"N	80°39'56.9253"W	point
Betty Schafer MSH 401H WP1 r2	5900.00	7918.31	-6399.59	1736087.51	14531532.73	40°00'45.6335"N	80°39'29.9439"W	point
Betty Schafer MSH 401H LP Rev 6	5997.00	-1091.99	-2642.13	1739843.50	14522525.95	39°59'16.4463"N	80°38'42.1145"W	point

WELLPATH COMPOSITION - Ref Wellbore: Betty Schafer MSH 401H AWB    Ref Wellpath: Betty Schafer MSH 401H awp Proj: 31266'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	361.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	1 Total MWD 17.5" IFR-MSA 160' - 361'	Betty Schafer MSH 401H AWB	3/29/2024
361.00	1683.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	2 Total MWD 12.25" IFR-MSA 421' - 1683'	Betty Schafer MSH 401H AWB	3/29/2024
1683.00	7518.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	3 BH MWD 8.5" IFR-MSA 1762' - 7518'	Betty Schafer MSH 401H AWB	3/29/2024
7518.00	31266.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	4 BH MWD 8.5" IFR-MSA 7615' - 31241'	Betty Schafer MSH 401H AWB	4/8/2024