



# SWN PRODUCTION COMPANY, LLC



Location: Marshall County, WV  
 Field: Marshall  
 Facility: Yocum MSH Pad

Slot: 6H  
 Well: Yocum MSH 6H  
 Wellbore: Yocum MSH 6H AWB

### 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
21897.00	89.570	133.450	7281.94	-10452.85	9982.85	1767389.49	14419271.25	39°42'14.4101"N	80°32'54.7880"W

### Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Yocum MSH Pad			1757446.734	14429785.622	39°43'58.8360"N	80°35'1.4240"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
6H	-65.59	-36.25	1757410.500	14429720.060	39°43'58.1895"N	80°35'1.8919"W

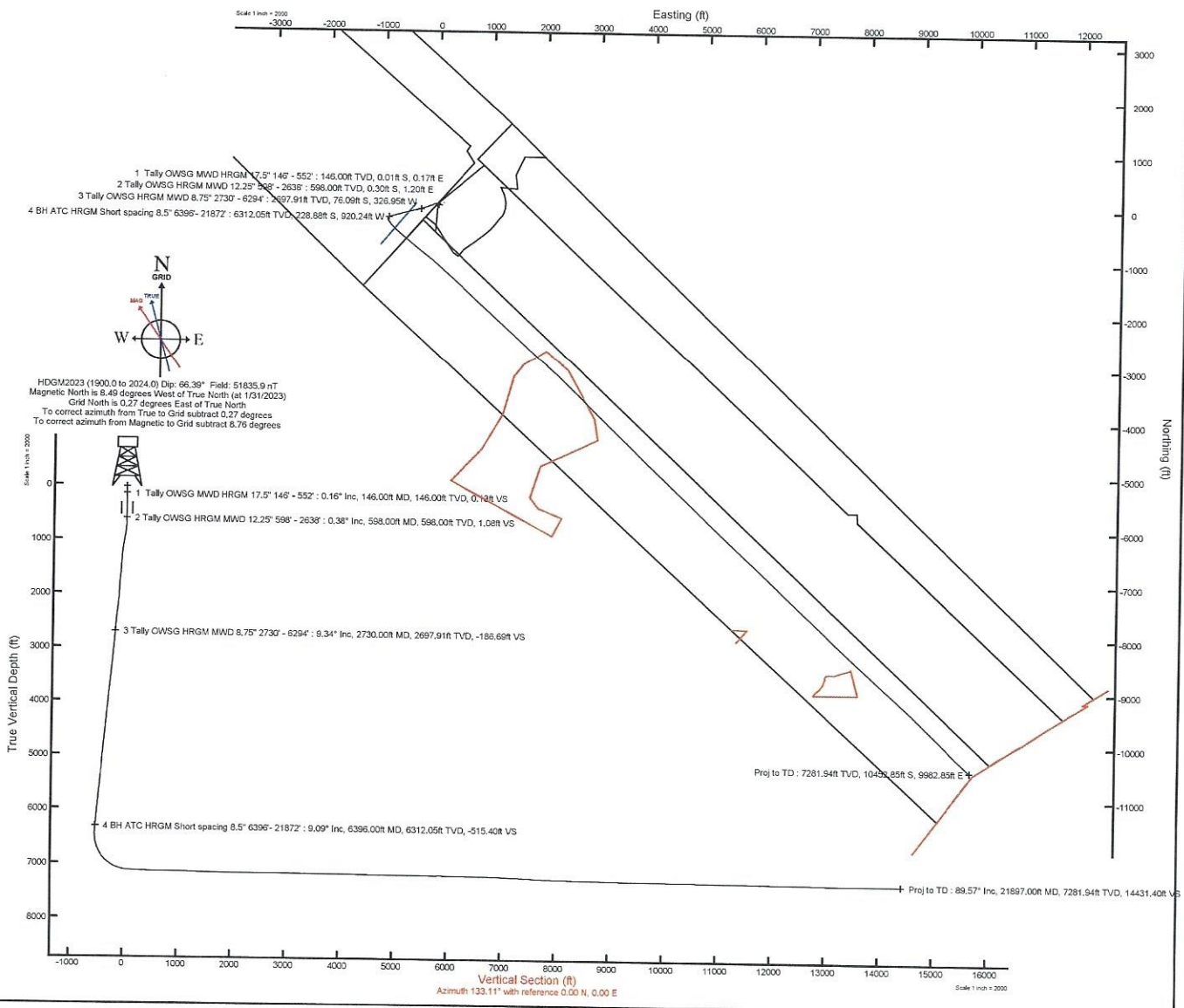
SDC 41 (KB) to Ground level (At Slot: 6H)	26ft
Mean Sea Level to Ground level (At Slot: 6H)	-1052.7ft
SDC 41 (KB) to Mean Sea Level	1078.7ft
Plot reference wellpath is Yocum MSH 6H awp Proj: 21897	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC 41 (KB)	North Reference: Grid north
Reference wellpath measured depths are referenced to SDC 41 (KB)	Scale: True distance
SDC 41 (KB) to Mean Sea Level: 1078.7 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: 6H): -1052.7 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: tranlam on 2023-02-21; Database: WA_MPL_EASTERNUS_Defn

API: 47051024630000  
 BH JOB: 111435759  
 DURATION: 02.16.2023 to 02.20.2023  
 RIG: SDC 41

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 Environmental Protection



03/15/2024

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 6H
Field	Marshall	API	47051024630000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 6H AWB
Slot	6H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Tranlam
Scale	0.999616	Report Generated	2/21/2023 at 1:10:50 PM
Convergence at slot	0.27° 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	-65.59	-36.25	1757410.50	14429720.06	39°43'58.1895"N	80°35'1.8919"W
Facility Reference Pt			1757446.73	14429785.62	39°43'58.8360"N	80°35'1.4240"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	1078.70ft
Horizontal Reference Pt	Slot	SDC 41 (KB) to Mean Sea Level	1078.70ft
Vertical Reference Pt	SDC 41 (KB)	SDC 41 (KB) to Ground Level at Slot (6H)	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	133.11°

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 Environmental Protection  
 AUG 31 2023

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 6H
Field	Marshall	API	47051024630000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 6H AWB
Slot	6H		

WELLPATH DATA (236 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]	Comments
0.00†	0.000	92.130	0.00	0.00	0.00	0.00	1757410.50	14429720.06	39°43'58.1895"N	80°35'1.8919"W	0.00	0.000	0.00	
26.00	0.000	92.130	26.00	0.00	0.00	0.00	1757410.50	14429720.06	39°43'58.1895"N	80°35'1.8919"W	0.00	0.000	0.00	
146.00	0.160	92.130	146.00	0.13	-0.01	0.17	1757410.67	14429720.05	39°43'58.1894"N	80°35'1.8897"W	0.17	92.130	0.13	
237.00	0.340	66.270	237.00	0.33	0.10	0.54	1757411.04	14429720.16	39°43'58.1904"N	80°35'1.8849"W	0.55	79.773	0.23	
326.00	0.220	154.230	326.00	0.59	0.05	0.86	1757411.36	14429720.11	39°43'58.1899"N	80°35'1.8809"W	0.86	86.657	0.45	
418.00	0.280	153.720	418.00	0.97	-0.31	1.03	1757411.53	14429719.75	39°43'58.1864"N	80°35'1.8786"W	1.08	106.717	0.07	
504.00	0.150	45.670	504.00	1.17	-0.42	1.21	1757411.71	14429719.64	39°43'58.1853"N	80°35'1.8764"W	1.28	109.191	0.41	
552.00	0.080	111.580	552.00	1.20	-0.39	1.28	1757411.78	14429719.67	39°43'58.1856"N	80°35'1.8755"W	1.34	106.847	0.29	
598.00	0.380	310.330	598.00	1.08	-0.30	1.20	1757411.70	14429719.76	39°43'58.1864"N	80°35'1.8766"W	1.23	104.148	0.99	
690.00	2.220	308.960	689.97	-1.00	1.02	-0.42	1757410.08	14429721.08	39°43'58.1995"N	80°35'1.8972"W	1.10	337.491	2.00	
784.00	4.870	309.300	783.78	-6.80	4.69	-4.93	1757405.58	14429724.75	39°43'58.2361"N	80°35'1.9546"W	6.80	313.591	2.82	
876.00	7.880	305.260	875.20	-16.95	10.80	-13.10	1757397.41	14429730.86	39°43'58.2969"N	80°35'2.0589"W	16.98	309.517	3.31	
969.00	9.790	293.790	967.10	-30.73	17.68	-25.54	1757384.97	14429737.73	39°43'58.3653"N	80°35'2.2177"W	31.06	304.684	2.78	
1060.00	11.290	278.920	1056.58	-45.40	22.18	-41.42	1757369.09	14429742.23	39°43'58.4106"N	80°35'2.4208"W	46.99	298.164	3.40	
1152.00	12.480	262.220	1146.63	-59.12	22.23	-60.18	1757350.35	14429742.28	39°43'58.4119"N	80°35'2.6608"W	64.15	290.274	3.94	
1244.00	12.850	249.550	1236.41	-69.95	17.31	-79.62	1757330.92	14429737.36	39°43'58.3642"N	80°35'2.9099"W	81.47	282.265	3.04	
1335.00	11.620	242.500	1325.35	-77.50	9.54	-97.23	1757313.31	14429729.60	39°43'58.2882"N	80°35'3.1358"W	97.69	275.604	2.12	
1426.00	10.310	239.690	1414.69	-82.87	1.20	-112.39	1757298.16	14429721.26	39°43'58.2065"N	80°35'3.3303"W	112.39	270.611	1.55	
1519.00	10.410	243.750	1506.17	-88.20	-6.72	-127.11	1757283.44	14429713.34	39°43'58.1289"N	80°35'3.5192"W	127.29	266.975	0.79	
1610.00	9.060	253.180	1595.86	-94.69	-12.43	-141.34	1757269.21	14429707.64	39°43'58.0731"N	80°35'3.7017"W	141.89	264.975	2.29	
1702.00	8.610	262.100	1686.78	-102.65	-15.47	-155.10	1757255.46	14429704.60	39°43'58.0437"N	80°35'3.8780"W	155.87	264.304	1.57	
1794.00	9.110	256.430	1777.68	-110.99	-18.13	-169.00	1757241.57	14429701.94	39°43'58.0181"N	80°35'4.0561"W	169.97	263.878	1.09	
1886.00	9.120	243.120	1868.53	-117.48	-23.13	-182.58	1757227.99	14429696.94	39°43'57.9692"N	80°35'4.2303"W	184.04	262.779	2.29	
1978.00	7.940	238.090	1959.51	-121.62	-29.79	-194.48	1757216.09	14429690.28	39°43'57.9040"N	80°35'4.3829"W	196.75	261.292	1.52	
2068.00	7.950	246.860	2048.65	-125.74	-35.52	-205.48	1757205.10	14429684.55	39°43'57.8479"N	80°35'4.5241"W	208.53	260.193	1.35	
2160.00	11.840	255.540	2139.27	-133.36	-40.38	-220.48	1757190.11	14429679.70	39°43'57.8005"N	80°35'4.7163"W	224.14	259.622	4.52	
2252.00	13.950	254.610	2228.94	-144.22	-45.68	-240.31	1757170.28	14429674.40	39°43'57.7491"N	80°35'4.9705"W	244.61	259.237	2.30	
2345.00	12.430	252.010	2319.49	-154.92	-51.75	-260.64	1757149.96	14429668.33	39°43'57.6900"N	80°35'5.2311"W	265.73	258.771	1.75	
2437.00	11.080	249.660	2409.56	-163.65	-57.88	-278.35	1757132.26	14429662.21	39°43'57.6303"N	80°35'5.4581"W	284.30	258.254	1.56	
2529.00	10.600	249.520	2499.92	-171.37	-63.91	-294.56	1757116.05	14429656.17	39°43'57.5714"N	80°35'5.6660"W	301.42	257.758	0.52	

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 6H
Field	Marshall	API	47051024630000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 6H AWB
Slot	6H		

WELLPATH DATA (236 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]	Comments
2583.00	10.270	250.300	2553.02	-175.78	-67.27	-303.75	1757106.87	14429652.82	39°43'57.5386"N	80°35'5.7838"W	311.11	257.512	0.66	
2638.00	9.760	249.980	2607.18	-180.12	-70.52	-312.74	1757097.88	14429649.57	39°43'57.5069"N	80°35'5.8991"W	320.60	257.293	0.93	
2730.00	9.340	247.130	2697.91	-186.69	-76.09	-326.95	1757083.68	14429644.00	39°43'57.4525"N	80°35'6.0812"W	335.69	256.899	0.69	
2822.00	8.960	250.290	2788.74	-193.00	-81.41	-340.57	1757070.06	14429638.68	39°43'57.4006"N	80°35'6.2559"W	350.17	256.557	0.68	
2914.00	8.920	256.640	2879.62	-200.21	-85.47	-354.26	1757056.38	14429634.62	39°43'57.3610"N	80°35'6.4313"W	364.42	256.435	1.07	
3003.00	8.970	257.010	2967.54	-207.89	-88.63	-367.73	1757042.91	14429631.47	39°43'57.3305"N	80°35'6.6040"W	378.26	256.450	0.09	
3095.00	8.330	254.330	3058.49	-215.35	-92.04	-381.14	1757029.51	14429628.06	39°43'57.2974"N	80°35'6.7758"W	392.09	256.424	0.82	
3187.00	8.160	255.200	3149.54	-222.27	-95.51	-393.87	1757016.79	14429624.59	39°43'57.2637"N	80°35'6.9389"W	405.28	256.370	0.23	
3279.00	8.900	260.880	3240.53	-230.10	-98.30	-407.21	1757003.45	14429621.80	39°43'57.2366"N	80°35'7.1098"W	418.90	256.428	1.22	
3371.00	9.550	261.890	3331.34	-239.24	-100.51	-421.79	1756988.88	14429619.59	39°43'57.2155"N	80°35'7.2966"W	433.60	256.597	0.73	
3464.00	10.300	256.840	3422.95	-248.69	-103.49	-437.52	1756973.15	14429616.61	39°43'57.1868"N	80°35'7.4982"W	449.59	256.692	1.23	
3555.00	10.020	254.770	3512.52	-257.36	-107.42	-453.08	1756957.59	14429612.68	39°43'57.1486"N	80°35'7.6976"W	465.64	256.662	0.51	
3645.00	9.760	257.050	3601.18	-265.73	-111.19	-468.07	1756942.61	14429608.92	39°43'57.1121"N	80°35'7.8896"W	481.10	256.637	0.52	
3738.00	10.150	259.090	3692.78	-274.94	-114.50	-483.80	1756926.89	14429605.60	39°43'57.0800"N	80°35'8.0912"W	497.17	256.684	0.57	
3828.00	10.240	257.190	3781.36	-284.08	-117.78	-499.39	1756911.31	14429602.33	39°43'57.0484"N	80°35'8.2909"W	513.09	256.729	0.39	
3921.00	10.370	256.410	3872.86	-293.31	-121.58	-515.58	1756895.11	14429598.53	39°43'57.0116"N	80°35'8.4984"W	529.72	256.732	0.21	
4013.00	9.570	255.240	3963.47	-301.93	-125.47	-531.03	1756879.68	14429594.64	39°43'56.9738"N	80°35'8.6963"W	545.65	256.706	0.90	
4103.00	9.710	254.180	4052.20	-309.82	-129.45	-545.56	1756865.15	14429590.66	39°43'56.9352"N	80°35'8.8826"W	560.71	256.652	0.25	
4195.00	10.230	254.100	4142.81	-318.03	-133.80	-560.89	1756849.83	14429586.31	39°43'56.8928"N	80°35'9.0790"W	576.63	256.583	0.57	
4289.00	9.590	254.510	4235.41	-326.41	-138.18	-576.46	1756834.26	14429581.93	39°43'56.8503"N	80°35'9.2786"W	592.79	256.520	0.68	
4381.00	9.230	254.170	4326.17	-334.21	-142.24	-590.94	1756819.78	14429577.88	39°43'56.8108"N	80°35'9.4642"W	607.82	256.466	0.40	
4473.00	9.550	257.960	4416.94	-342.38	-145.84	-605.51	1756805.23	14429574.27	39°43'56.7759"N	80°35'9.6508"W	622.82	256.458	0.76	
4565.00	9.370	258.730	4507.69	-351.10	-148.90	-620.32	1756790.42	14429571.22	39°43'56.7464"N	80°35'9.8405"W	637.94	256.502	0.24	
4658.00	9.460	257.360	4599.43	-359.81	-152.05	-635.20	1756775.55	14429568.07	39°43'56.7159"N	80°35'10.0312"W	653.14	256.538	0.26	
4749.00	9.830	255.480	4689.15	-368.18	-155.63	-650.01	1756760.74	14429564.49	39°43'56.6811"N	80°35'10.2211"W	668.39	256.535	0.53	
4841.00	10.010	254.080	4779.77	-376.50	-159.80	-665.31	1756745.45	14429560.32	39°43'56.6407"N	80°35'10.4171"W	684.23	256.494	0.33	
4932.00	10.340	253.270	4869.34	-384.67	-164.32	-680.73	1756730.03	14429555.81	39°43'56.5967"N	80°35'10.6148"W	700.28	256.429	0.40	
5025.00	10.260	252.270	4960.84	-392.90	-169.24	-696.61	1756714.15	14429550.88	39°43'56.5488"N	80°35'10.8184"W	716.88	256.345	0.21	
5117.00	10.010	251.330	5051.41	-400.67	-174.30	-711.99	1756698.78	14429545.83	39°43'56.4995"N	80°35'11.0155"W	733.02	256.244	0.33	
5207.00	9.540	251.310	5140.10	-407.89	-179.19	-726.47	1756684.31	14429540.94	39°43'56.4518"N	80°35'11.2011"W	748.24	256.144	0.52	

Location of Gas



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# Actual Wellpath Report

Yocum MSH 6H awp Proj: 21897'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 6H
Field	Marshall	API	47051024630000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 6H AWB
Slot	6H		

WELLPATH DATA (236 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]	Comments
5299.00	9.680	256.690	5230.81	-415.78	-183.41	-741.22	1756669.57	14429536.72	39°43'56.4108"N	80°35'11.3901"W	763.57	256.101	0.99	
5391.00	10.040	259.290	5321.45	-424.79	-186.69	-756.62	1756654.17	14429533.45	39°43'56.3791"N	80°35'11.5875"W	779.32	256.140	0.62	
5482.00	10.580	256.670	5410.98	-434.09	-190.09	-772.55	1756638.25	14429530.05	39°43'56.3463"N	80°35'11.7915"W	795.59	256.177	0.79	
5573.00	9.960	257.510	5500.52	-443.15	-193.71	-788.36	1756622.44	14429526.42	39°43'56.3111"N	80°35'11.9941"W	811.81	256.195	0.70	
5663.00	10.370	257.070	5589.11	-452.08	-197.21	-803.85	1756606.96	14429522.93	39°43'56.2773"N	80°35'12.1926"W	827.69	256.216	0.46	
5754.00	11.230	256.000	5678.50	-461.46	-201.19	-820.44	1756590.38	14429518.95	39°43'56.2387"N	80°35'12.4051"W	844.74	256.222	0.97	
5844.00	9.710	252.860	5767.00	-469.99	-205.54	-836.19	1756574.63	14429514.60	39°43'56.1964"N	80°35'12.6071"W	861.08	256.190	1.80	
5935.00	8.840	254.680	5856.81	-477.46	-209.65	-850.27	1756560.56	14429510.49	39°43'56.1564"N	80°35'12.7875"W	875.74	256.149	1.01	
6025.00	8.430	255.670	5945.79	-484.63	-213.11	-863.33	1756547.50	14429507.03	39°43'56.1228"N	80°35'12.9549"W	889.25	256.134	0.48	
6116.00	8.870	255.150	6035.75	-491.94	-216.56	-876.58	1756534.26	14429503.58	39°43'56.0893"N	80°35'13.1246"W	902.93	256.123	0.49	
6206.00	9.760	256.130	6124.57	-499.78	-220.17	-890.69	1756520.16	14429499.98	39°43'56.0543"N	80°35'13.3055"W	917.50	256.115	1.00	
6294.00	9.270	252.950	6211.35	-507.37	-224.03	-904.71	1756506.14	14429496.11	39°43'56.0168"N	80°35'13.4851"W	932.03	256.091	0.82	
6396.00	9.090	252.420	6312.05	-515.40	-228.88	-920.24	1756490.61	14429491.27	39°43'55.9696"N	80°35'13.6842"W	948.28	256.033	0.19	
6488.00	10.070	251.230	6402.76	-522.75	-233.66	-934.79	1756476.08	14429486.49	39°43'55.9230"N	80°35'13.8707"W	963.55	255.966	1.09	
6579.00	9.910	210.290	6492.49	-524.76	-242.99	-946.28	1756464.58	14429477.16	39°43'55.8313"N	80°35'14.0184"W	976.98	255.598	7.65	
6670.00	12.380	174.690	6581.87	-515.72	-259.49	-949.33	1756461.53	14429460.67	39°43'55.6684"N	80°35'14.0584"W	984.16	254.712	7.88	
6762.00	18.970	156.450	6670.46	-494.58	-283.06	-942.43	1756468.43	14429437.11	39°43'55.4352"N	80°35'13.9715"W	984.02	253.283	8.86	
6852.00	25.230	145.960	6753.83	-462.40	-312.40	-925.83	1756485.03	14429407.78	39°43'55.1444"N	80°35'13.7607"W	977.12	251.354	8.20	
6941.00	33.490	139.670	6831.35	-419.43	-346.91	-899.27	1756511.58	14429373.29	39°43'54.8022"N	80°35'13.4227"W	963.86	248.905	9.90	
7032.00	42.630	139.950	6902.93	-363.77	-389.73	-863.11	1756547.72	14429330.48	39°43'54.3774"N	80°35'12.9625"W	947.02	245.699	10.05	
7124.00	50.120	134.630	6966.38	-297.43	-438.46	-817.86	1756592.95	14429281.77	39°43'53.8937"N	80°35'12.3862"W	927.98	241.804	9.15	
7215.00	57.240	131.700	7020.25	-224.17	-488.52	-764.37	1756646.42	14429231.73	39°43'53.3966"N	80°35'11.7045"W	907.14	237.417	8.24	
7305.00	65.350	128.860	7063.45	-145.41	-539.44	-704.16	1756706.61	14429180.83	39°43'52.8906"N	80°35'10.9368"W	887.04	232.545	9.43	
7398.00	73.280	129.540	7096.28	-58.68	-594.40	-636.80	1756773.95	14429125.89	39°43'52.3444"N	80°35'10.0779"W	871.10	226.972	8.55	
7489.00	80.570	129.320	7116.85	29.72	-650.66	-568.38	1756842.34	14429069.65	39°43'51.7853"N	80°35'9.2054"W	863.95	221.139	8.01	
7582.00	88.270	130.310	7125.88	122.06	-709.88	-497.34	1756913.35	14429010.45	39°43'51.1967"N	80°35'8.2997"W	866.76	215.015	8.35	
7675.00	88.060	128.720	7128.86	214.82	-769.03	-425.63	1756985.03	14428951.33	39°43'50.6090"N	80°35'7.3854"W	878.96	208.963	1.72	
7765.00	87.840	128.370	7132.08	304.48	-825.07	-355.29	1757055.35	14428895.31	39°43'50.0519"N	80°35'6.4883"W	898.32	203.297	0.46	
7856.00	88.220	127.300	7135.21	395.04	-880.86	-283.46	1757127.15	14428839.54	39°43'49.4973"N	80°35'5.5723"W	925.34	197.838	1.25	
7947.00	89.350	127.820	7137.14	485.59	-936.31	-211.34	1757199.24	14428784.11	39°43'48.9459"N	80°35'4.6525"W	959.87	192.719	1.37	



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# Actual Wellpath Report

Yocum MSH 6H awp Proj: 21897'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 6H
Field	Marshall	API	47051024630000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 6H AWB
Slot	6H		

WELLPATH DATA (236 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]	Comments
8039.00	89.290	127.410	7138.23	577.16	-992.46	-138.47	1757272.08	14428727.98	39°43'48.3876"N	80°35'3.7231"W	1002.08	187.943	0.45	
8139.00	90.370	131.060	7138.53	676.91	-1055.70	-61.03	1757349.50	14428664.77	39°43'47.7591"N	80°35'2.7357"W	1057.46	183.308	3.81	
8236.00	90.430	131.860	7137.85	773.87	-1119.92	11.66	1757422.16	14428600.57	39°43'47.1211"N	80°35'1.8091"W	1119.98	179.403	0.83	
8333.00	88.890	132.220	7138.43	870.85	-1184.88	83.70	1757494.17	14428535.64	39°43'46.4759"N	80°35'0.8910"W	1187.83	175.959	1.63	
8429.00	88.950	131.530	7140.24	966.81	-1248.94	155.17	1757565.61	14428471.60	39°43'45.8394"N	80°34'59.9801"W	1258.55	172.918	0.72	
8525.00	89.080	131.000	7141.89	1062.75	-1312.25	227.32	1757637.73	14428408.32	39°43'45.2105"N	80°34'59.0604"W	1331.79	170.172	0.57	
8622.00	89.690	133.260	7142.93	1159.72	-1377.31	299.25	1757709.63	14428343.28	39°43'44.5642"N	80°34'58.1436"W	1409.45	167.742	2.41	
8718.00	88.160	131.260	7144.73	1255.68	-1441.86	370.28	1757780.63	14428278.76	39°43'43.9231"N	80°34'57.2384"W	1488.64	165.597	2.62	
8814.00	89.480	133.290	7146.71	1351.65	-1506.42	441.29	1757851.62	14428214.23	39°43'43.2818"N	80°34'56.3333"W	1569.72	163.673	2.52	
8911.00	89.200	133.030	7147.82	1448.64	-1572.76	512.04	1757922.34	14428147.91	39°43'42.6228"N	80°34'55.4317"W	1654.02	161.966	0.39	
9007.00	89.170	132.280	7149.19	1544.63	-1637.80	582.64	1757992.91	14428082.89	39°43'41.9768"N	80°34'54.5321"W	1738.35	160.417	0.78	
9104.00	88.920	133.170	7150.81	1641.61	-1703.61	653.88	1758064.13	14428017.11	39°43'41.3232"N	80°34'53.6241"W	1824.78	159.002	0.95	
9200.00	88.920	132.270	7152.62	1737.59	-1768.72	724.40	1758134.62	14427952.02	39°43'40.6764"N	80°34'52.7255"W	1911.32	157.728	0.94	
9297.00	89.630	132.920	7153.84	1834.58	-1834.37	795.80	1758205.99	14427886.40	39°43'40.0244"N	80°34'51.8156"W	1999.55	156.547	0.99	
9394.00	89.020	131.900	7154.99	1931.56	-1899.78	867.41	1758277.58	14427821.01	39°43'39.3746"N	80°34'50.9029"W	2088.44	155.459	1.23	
9490.00	90.550	132.500	7155.35	2027.54	-1964.26	938.53	1758348.66	14427756.56	39°43'38.7341"N	80°34'49.9966"W	2176.96	154.462	1.71	
9587.00	89.690	132.160	7155.14	2124.53	-2029.58	1010.23	1758420.34	14427691.26	39°43'38.0852"N	80°34'49.0827"W	2267.11	153.538	0.95	
9684.00	90.370	132.970	7155.09	2221.53	-2095.19	1081.68	1758491.76	14427625.67	39°43'37.4335"N	80°34'48.1723"W	2357.94	152.694	1.09	
9780.00	89.970	132.310	7154.81	2317.52	-2160.22	1152.29	1758562.35	14427560.67	39°43'36.7876"N	80°34'47.2724"W	2448.34	151.924	0.80	
9877.00	90.000	132.340	7154.83	2414.51	-2225.54	1224.01	1758634.04	14427495.38	39°43'36.1388"N	80°34'46.3585"W	2539.92	151.190	0.04	
9973.00	90.000	132.710	7154.83	2510.51	-2290.42	1294.76	1758704.76	14427430.52	39°43'35.4942"N	80°34'45.4568"W	2631.05	150.521	0.39	
10070.00	89.910	132.850	7154.91	2607.51	-2356.31	1365.96	1758775.93	14427364.67	39°43'34.8399"N	80°34'44.5496"W	2723.60	149.899	0.17	
10166.00	90.180	132.380	7154.83	2703.50	-2421.30	1436.60	1758846.55	14427299.69	39°43'34.1942"N	80°34'43.6493"W	2815.41	149.319	0.56	
10263.00	89.450	132.810	7155.15	2800.50	-2486.95	1508.01	1758917.93	14427234.07	39°43'33.5421"N	80°34'42.7394"W	2908.44	148.769	0.87	
10359.00	89.690	133.220	7155.87	2896.50	-2552.44	1578.20	1758988.09	14427168.60	39°43'32.8916"N	80°34'41.8450"W	3000.95	148.271	0.49	
10456.00	89.600	132.820	7156.47	2993.49	-2618.62	1649.12	1759058.98	14427102.45	39°43'32.2343"N	80°34'40.9414"W	3094.63	147.799	0.42	
10553.00	90.030	132.950	7156.78	3090.49	-2684.63	1720.19	1759130.03	14427036.47	39°43'31.5787"N	80°34'40.0357"W	3188.46	147.350	0.46	
10649.00	90.680	131.830	7156.19	3186.48	-2749.35	1791.09	1759200.90	14426971.77	39°43'30.9358"N	80°34'39.1322"W	3281.30	146.917	1.35	
10746.00	89.050	132.250	7156.41	3283.46	-2814.30	1863.13	1759272.91	14426906.85	39°43'30.2905"N	80°34'38.2142"W	3375.13	146.495	1.74	
10843.00	90.650	131.560	7156.67	3380.43	-2879.08	1935.32	1759345.07	14426842.09	39°43'29.6469"N	80°34'37.2942"W	3469.09	146.091	1.80	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 6H
Field	Marshall	API	47051024630000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 6H AWB
Slot	6H		

WELLPATH DATA (236 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]	Comments
10939.00	88.000	131.570	7157.80	3476.38	-2942.77	2007.13	1759416.86	14426778.43	39°43'29.0142"N	80°34'36.3789"W	3562.09	145.704	2.76	
11036.00	91.320	134.420	7158.38	3573.36	-3008.90	2078.06	1759487.76	14426712.32	39°43'28.3573"N	80°34'35.4752"W	3656.75	145.370	4.51	
11132.00	90.180	130.940	7157.12	3669.33	-3073.96	2148.62	1759558.29	14426647.29	39°43'27.7111"N	80°34'34.5761"W	3750.44	145.047	3.81	
11229.00	89.780	130.850	7157.15	3766.26	-3137.46	2221.94	1759631.58	14426583.81	39°43'27.0801"N	80°34'33.6415"W	3844.57	144.694	0.42	
11326.00	89.720	133.680	7157.58	3863.24	-3202.69	2293.72	1759703.33	14426518.60	39°43'26.4320"N	80°34'32.7269"W	3939.34	144.390	2.92	
11422.00	89.820	134.640	7157.96	3959.22	-3269.57	2362.59	1759772.17	14426451.75	39°43'25.7679"N	80°34'31.8495"W	4033.85	144.148	1.01	
11519.00	89.110	133.440	7158.87	4056.20	-3337.00	2432.31	1759841.87	14426384.35	39°43'25.0983"N	80°34'30.9613"W	4129.37	143.912	1.44	
11616.00	89.380	134.690	7160.14	4153.18	-3404.45	2502.00	1759911.54	14426316.92	39°43'24.4284"N	80°34'30.0735"W	4224.96	143.687	1.32	
11712.00	88.460	133.450	7161.95	4249.14	-3471.21	2570.96	1759980.47	14426250.19	39°43'23.7654"N	80°34'29.1950"W	4319.62	143.474	1.61	
11809.00	89.630	132.670	7163.57	4346.13	-3537.43	2641.82	1760051.30	14426184.00	39°43'23.1077"N	80°34'28.2921"W	4415.04	143.247	1.45	
11905.00	89.320	134.860	7164.45	4442.11	-3603.82	2711.15	1760120.60	14426117.63	39°43'22.4483"N	80°34'27.4090"W	4509.75	143.046	2.30	
12002.00	88.240	134.070	7166.52	4539.06	-3671.75	2780.35	1760189.78	14426049.73	39°43'21.7737"N	80°34'26.5274"W	4605.66	142.866	1.38	
12098.00	90.550	136.220	7167.53	4634.98	-3739.79	2848.05	1760257.45	14425981.71	39°43'21.0981"N	80°34'25.6651"W	4700.79	142.709	3.29	
12195.00	89.200	134.720	7167.74	4731.89	-3808.94	2916.07	1760325.45	14425912.59	39°43'20.4115"N	80°34'24.7988"W	4797.03	142.563	2.08	
12292.00	89.290	132.430	7169.02	4828.88	-3875.79	2986.34	1760395.68	14425845.76	39°43'19.7475"N	80°34'23.9037"W	4892.85	142.385	2.36	
12388.00	89.690	134.600	7169.87	4924.86	-3941.89	3055.95	1760465.27	14425779.70	39°43'19.0911"N	80°34'23.0168"W	4987.71	142.215	2.30	
12485.00	89.230	133.730	7170.79	5021.84	-4009.46	3125.53	1760534.82	14425712.14	39°43'18.4200"N	80°34'22.1305"W	5083.77	142.062	1.01	
12581.00	91.600	134.060	7170.09	5117.82	-4076.02	3194.70	1760603.96	14425645.62	39°43'17.7590"N	80°34'21.2493"W	5178.80	141.911	2.49	
12678.00	89.110	133.780	7169.49	5214.80	-4143.30	3264.56	1760673.80	14425578.36	39°43'17.0908"N	80°34'20.3594"W	5274.87	141.765	2.58	
12775.00	89.690	133.840	7170.51	5311.79	-4210.44	3334.56	1760743.77	14425511.24	39°43'16.4239"N	80°34'19.4677"W	5370.95	141.622	0.60	
12871.00	89.970	133.690	7170.79	5407.78	-4276.85	3403.88	1760813.07	14425444.87	39°43'15.7644"N	80°34'18.5845"W	5466.06	141.484	0.33	
12968.00	89.350	133.210	7171.37	5504.78	-4343.55	3474.30	1760883.46	14425378.19	39°43'15.1018"N	80°34'17.6874"W	5562.12	141.345	0.81	
13064.00	89.480	133.610	7172.35	5600.77	-4409.52	3544.04	1760953.17	14425312.24	39°43'14.4466"N	80°34'16.7990"W	5657.22	141.210	0.44	
13161.00	89.140	134.080	7173.52	5697.76	-4476.71	3613.99	1761023.09	14425245.08	39°43'13.7793"N	80°34'15.9079"W	5753.42	141.087	0.60	
13257.00	90.620	135.110	7173.72	5793.72	-4544.11	3682.35	1761091.43	14425177.71	39°43'13.1100"N	80°34'15.0372"W	5848.81	140.980	1.88	
13353.00	89.820	134.740	7173.35	5889.67	-4611.90	3750.32	1761159.37	14425109.94	39°43'12.4368"N	80°34'14.1715"W	5944.28	140.883	0.92	
13450.00	89.660	134.790	7173.79	5986.63	-4680.21	3819.19	1761228.21	14425041.66	39°43'11.7585"N	80°34'13.2944"W	6040.74	140.785	0.17	
13547.00	89.540	134.150	7174.47	6083.60	-4748.16	3888.41	1761297.40	14424973.74	39°43'11.0837"N	80°34'12.4127"W	6137.16	140.685	0.67	
13643.00	89.350	133.080	7175.40	6179.59	-4814.37	3957.91	1761366.88	14424907.55	39°43'10.4260"N	80°34'11.5274"W	6232.43	140.576	1.13	
13740.00	89.600	133.140	7176.29	6276.59	-4880.66	4028.72	1761437.66	14424841.28	39°43'9.7675"N	80°34'10.6253"W	6328.62	140.462	0.27	



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# Actual Wellpath Report

Yocum MSH 6H awp Proj: 21897'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 6H
Field	Marshall	API	47051024630000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 6H AWB
Slot	6H		

WELLPATH DATA (236 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]	Comments
13837.00	89.420	132.510	7177.11	6373.58	-4946.60	4099.86	1761508.77	14424775.38	39°43'9.1125"N	80°34'9.7189"W	6424.77	140.347	0.68	
13933.00	89.850	133.370	7177.73	6469.58	-5011.99	4170.13	1761579.02	14424710.01	39°43'8.4629"N	80°34'8.8236"W	6519.97	140.238	1.00	
14030.00	88.980	132.590	7178.72	6566.57	-5078.12	4241.09	1761649.95	14424643.91	39°43'7.8061"N	80°34'7.9196"W	6616.20	140.132	1.20	
14127.00	88.990	133.420	7180.44	6663.55	-5144.26	4312.02	1761720.85	14424577.78	39°43'7.1490"N	80°34'7.0161"W	6712.45	140.030	0.86	
14223.00	88.430	134.170	7182.60	6759.52	-5210.69	4381.29	1761790.10	14424511.39	39°43'6.4892"N	80°34'6.1336"W	6807.86	139.942	0.97	
14320.00	88.150	133.230	7185.49	6856.47	-5277.67	4451.39	1761860.17	14424444.43	39°43'5.8239"N	80°34'5.2407"W	6904.25	139.854	1.01	
14416.00	88.090	132.590	7188.64	6952.42	-5343.00	4521.66	1761930.42	14424379.13	39°43'5.1750"N	80°34'4.3454"W	6999.50	139.759	0.67	
14513.00	88.950	132.740	7191.15	7049.38	-5408.71	4592.96	1762001.69	14424313.44	39°43'4.5221"N	80°34'3.4370"W	7095.74	139.663	0.90	
14610.00	88.520	132.890	7193.29	7146.36	-5474.62	4664.10	1762072.80	14424247.55	39°43'3.8674"N	80°34'2.5308"W	7192.03	139.571	0.47	
14706.00	88.340	133.250	7195.92	7242.32	-5540.15	4734.21	1762142.88	14424182.05	39°43'3.2164"N	80°34'1.6377"W	7287.39	139.485	0.42	
14803.00	87.420	133.430	7199.51	7339.25	-5606.68	4804.70	1762213.35	14424115.54	39°43'2.5556"N	80°34'0.7397"W	7383.77	139.405	0.97	
14900.00	87.140	133.560	7204.11	7436.14	-5673.37	4874.99	1762283.61	14424048.88	39°43'1.8931"N	80°33'59.8443"W	7480.15	139.328	0.32	
14996.00	87.410	133.490	7208.67	7532.03	-5739.41	4944.52	1762353.11	14423982.87	39°43'1.2372"N	80°33'58.9587"W	7575.56	139.255	0.29	
15093.00	87.290	133.230	7213.16	7628.93	-5805.94	5014.97	1762423.53	14423916.37	39°43'0.5764"N	80°33'58.0613"W	7671.95	139.181	0.29	
15189.00	87.100	133.930	7217.86	7724.81	-5872.03	5084.43	1762492.96	14423850.29	39°42'59.9198"N	80°33'57.1765"W	7767.38	139.112	0.75	
15286.00	89.010	132.950	7221.15	7821.74	-5938.69	5154.82	1762563.32	14423783.67	39°42'59.2577"N	80°33'56.2799"W	7863.85	139.042	2.21	
15383.00	88.800	133.530	7223.00	7918.73	-6005.13	5225.47	1762633.95	14423717.25	39°42'58.5977"N	80°33'55.3799"W	7960.34	138.971	0.64	
15479.00	89.170	133.520	7224.70	8014.71	-6071.23	5295.06	1762703.52	14423651.18	39°42'57.9411"N	80°33'54.4934"W	8055.90	138.906	0.39	
15576.00	89.010	132.710	7226.24	8111.69	-6137.52	5365.86	1762774.29	14423584.92	39°42'57.2827"N	80°33'53.5916"W	8152.40	138.838	0.85	
15672.00	88.280	133.370	7228.51	8207.67	-6203.02	5436.00	1762844.40	14423519.44	39°42'56.6320"N	80°33'52.6980"W	8247.88	138.770	1.02	
15769.00	88.060	133.170	7231.61	8304.62	-6269.47	5506.60	1762914.97	14423453.01	39°42'55.9718"N	80°33'51.7988"W	8344.39	138.707	0.31	
15865.00	88.000	132.690	7234.91	8400.56	-6334.82	5576.85	1762985.19	14423387.69	39°42'55.3227"N	80°33'50.9040"W	8439.85	138.641	0.50	
15961.00	89.170	132.290	7237.28	8496.52	-6399.64	5647.61	1763055.93	14423322.89	39°42'54.6786"N	80°33'50.0024"W	8535.28	138.572	1.29	
16058.00	90.520	133.580	7237.54	8593.52	-6465.71	5718.62	1763126.92	14423256.85	39°42'54.0223"N	80°33'49.0978"W	8631.81	138.509	1.92	
16155.00	89.630	132.090	7237.42	8690.51	-6531.66	5789.75	1763198.02	14423190.93	39°42'53.3671"N	80°33'48.1917"W	8728.33	138.446	1.79	
16252.00	88.920	132.720	7238.64	8787.50	-6597.07	5861.37	1763269.61	14423125.54	39°42'52.7173"N	80°33'47.2794"W	8824.79	138.379	0.98	
16349.00	88.890	133.020	7240.50	8884.48	-6663.05	5932.45	1763340.66	14423059.59	39°42'52.0618"N	80°33'46.3739"W	8921.33	138.320	0.31	
16445.00	89.110	133.120	7242.17	8980.46	-6728.59	6002.57	1763410.75	14422994.07	39°42'51.4106"N	80°33'45.4808"W	9016.92	138.264	0.25	
16541.00	88.710	133.280	7244.00	9076.44	-6794.30	6072.54	1763480.69	14422928.39	39°42'50.7579"N	80°33'44.5895"W	9112.53	138.211	0.45	
16638.00	88.800	133.010	7246.11	9173.42	-6860.62	6143.29	1763551.42	14422862.10	39°42'50.0991"N	80°33'43.6883"W	9209.13	138.157	0.29	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 6H
Field	Marshall	API	47051024630000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 6H AWB
Slot	6H		

**WELLPATH DATA (236 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]	Comments
16735.00	89.630	133.900	7247.44	9270.41	-6927.32	6213.70	1763621.80	14422795.41	39°42'49.4364"N	80°33'42.7915"W	9305.80	138.108	1.25	
16831.00	90.000	132.530	7247.75	9366.41	-6993.06	6283.66	1763691.73	14422729.71	39°42'48.7834"N	80°33'41.9004"W	9401.45	138.058	1.48	
16928.00	89.600	133.810	7248.08	9463.40	-7059.42	6354.40	1763762.45	14422663.37	39°42'48.1242"N	80°33'40.9993"W	9498.10	138.009	1.38	
17025.00	89.600	134.020	7248.76	9560.39	-7126.69	6424.28	1763832.30	14422596.12	39°42'47.4559"N	80°33'40.1094"W	9594.85	137.967	0.22	
17121.00	89.380	133.530	7249.62	9656.38	-7193.11	6493.59	1763901.58	14422529.73	39°42'46.7963"N	80°33'39.2266"W	9690.59	137.926	0.56	
17218.00	92.060	132.790	7248.40	9753.36	-7259.45	6564.34	1763972.30	14422463.42	39°42'46.1372"N	80°33'38.3255"W	9787.24	137.879	2.87	
17314.00	89.050	132.980	7247.47	9849.35	-7324.77	6634.67	1764042.60	14422398.12	39°42'45.4883"N	80°33'37.4297"W	9882.86	137.830	3.14	
17411.00	89.290	133.260	7248.87	9946.34	-7391.06	6705.46	1764113.37	14422331.85	39°42'44.8297"N	80°33'36.5279"W	9979.53	137.784	0.38	
17507.00	89.600	133.630	7249.80	10042.33	-7457.07	6775.16	1764183.04	14422265.87	39°42'44.1739"N	80°33'35.6403"W	10075.25	137.743	0.50	
17603.00	89.630	134.130	7250.45	10138.32	-7523.62	6844.35	1764252.21	14422199.35	39°42'43.5130"N	80°33'34.7590"W	10171.03	137.707	0.52	
17700.00	88.890	132.100	7251.70	10235.31	-7589.90	6915.15	1764322.98	14422133.09	39°42'42.8544"N	80°33'33.8573"W	10267.71	137.663	2.23	
17796.00	89.230	132.110	7253.28	10331.28	-7654.26	6986.36	1764394.17	14422068.76	39°42'42.2149"N	80°33'32.9501"W	10363.25	137.612	0.35	
17893.00	90.220	133.530	7253.74	10428.27	-7720.19	7057.51	1764465.28	14422002.85	39°42'41.5599"N	80°33'32.0439"W	10459.91	137.568	1.78	
17990.00	88.460	133.470	7254.86	10525.26	-7786.95	7127.86	1764535.61	14421936.12	39°42'40.8967"N	80°33'31.1478"W	10556.66	137.530	1.82	
18086.00	89.420	132.370	7256.63	10621.24	-7852.31	7198.15	1764605.87	14421870.78	39°42'40.2474"N	80°33'30.2526"W	10652.33	137.489	1.52	
18183.00	89.570	133.700	7257.49	10718.23	-7918.51	7269.05	1764676.74	14421804.61	39°42'39.5897"N	80°33'29.3496"W	10749.04	137.449	1.38	
18279.00	89.480	133.620	7258.29	10814.23	-7984.78	7338.50	1764746.16	14421738.37	39°42'38.9314"N	80°33'28.4651"W	10844.82	137.415	0.13	
18376.00	89.260	133.100	7259.35	10911.22	-8051.37	7409.02	1764816.65	14421671.80	39°42'38.2698"N	80°33'27.5670"W	10941.58	137.379	0.58	
18472.00	89.110	133.060	7260.72	11007.21	-8116.94	7479.13	1764886.74	14421606.26	39°42'37.6185"N	80°33'26.6740"W	11037.30	137.342	0.16	
18569.00	89.010	132.280	7262.31	11104.19	-8182.67	7550.44	1764958.02	14421540.55	39°42'36.9654"N	80°33'25.7657"W	11133.97	137.301	0.81	
18665.00	89.080	132.860	7263.91	11200.17	-8247.60	7621.13	1765028.68	14421475.64	39°42'36.3202"N	80°33'24.8653"W	11229.63	137.261	0.61	
18762.00	89.260	132.380	7265.31	11297.16	-8313.28	7692.50	1765100.03	14421409.99	39°42'35.6677"N	80°33'23.9562"W	11326.30	137.221	0.53	
18858.00	89.850	133.130	7266.06	11393.15	-8378.45	7762.98	1765170.49	14421344.85	39°42'35.0202"N	80°33'23.0584"W	11422.01	137.184	0.99	
18955.00	89.880	134.150	7266.29	11490.15	-8445.39	7833.18	1765240.66	14421277.93	39°42'34.3552"N	80°33'22.1645"W	11518.82	137.154	1.05	
19052.00	89.630	130.780	7266.70	11587.13	-8510.87	7904.73	1765312.17	14421212.48	39°42'33.7046"N	80°33'21.2532"W	11615.49	137.115	3.48	
19148.00	89.630	132.620	7267.32	11683.09	-8574.73	7976.40	1765383.82	14421148.65	39°42'33.0700"N	80°33'20.3401"W	11711.06	137.070	1.92	
19245.00	89.570	132.220	7268.00	11780.08	-8640.16	8048.00	1765455.40	14421083.24	39°42'32.4198"N	80°33'19.4281"W	11807.74	137.032	0.42	
19341.00	89.170	132.420	7269.06	11876.07	-8704.79	8118.98	1765526.35	14421018.64	39°42'31.7777"N	80°33'18.5240"W	11903.41	136.994	0.47	
19438.00	89.780	132.110	7269.94	11973.05	-8770.02	8190.76	1765598.10	14420953.43	39°42'31.1294"N	80°33'17.6097"W	12000.08	136.956	0.71	
19534.00	89.260	131.950	7270.75	12069.03	-8834.29	8262.07	1765669.38	14420889.18	39°42'30.4908"N	80°33'16.7014"W	12095.72	136.917	0.57	

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 6H
Field	Marshall	API	47051024630000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 6H AWB
Slot	6H		

WELLPATH DATA (236 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]	Comments
19630.00	89.230	132.640	7272.01	12165.01	-8898.89	8333.07	1765740.35	14420824.61	39°42'29.8489"N	80°33'15.7970"W	12191.40	136.881	0.72	
19727.00	89.320	131.570	7273.24	12261.99	-8963.92	8405.03	1765812.28	14420759.60	39°42'29.2027"N	80°33'14.8804"W	12288.06	136.843	1.11	
19823.00	89.450	131.220	7274.27	12357.94	-9027.40	8477.04	1765884.27	14420696.15	39°42'28.5718"N	80°33'13.9631"W	12383.62	136.801	0.39	
19920.00	89.660	131.790	7275.02	12454.90	-9091.68	8549.68	1765956.88	14420631.90	39°42'27.9330"N	80°33'13.0377"W	12480.21	136.760	0.63	
20017.00	89.260	133.550	7275.94	12551.89	-9157.41	8621.00	1766028.17	14420566.18	39°42'27.2798"N	80°33'12.1294"W	12576.96	136.728	1.86	
20113.00	91.480	131.710	7275.32	12647.87	-9222.42	8691.62	1766098.76	14420501.20	39°42'26.6339"N	80°33'11.2299"W	12672.70	136.697	3.00	
20209.00	87.940	131.830	7275.80	12743.83	-9286.36	8763.21	1766170.32	14420437.29	39°42'25.9985"N	80°33'10.3181"W	12768.33	136.660	3.69	
20305.00	89.170	130.730	7278.23	12839.75	-9349.67	8835.33	1766242.41	14420374.00	39°42'25.3692"N	80°33'9.3994"W	12863.88	136.620	1.72	
20402.00	89.690	135.730	7279.19	12936.71	-9416.09	8905.97	1766313.03	14420307.61	39°42'24.7094"N	80°33'8.4997"W	12960.67	136.595	5.18	
20498.00	89.170	133.580	7280.15	13032.66	-9483.55	8974.26	1766381.29	14420240.17	39°42'24.0393"N	80°33'7.6303"W	13056.61	136.581	2.30	
20595.00	89.660	134.040	7281.14	13129.65	-9550.70	9044.25	1766451.26	14420173.05	39°42'23.3722"N	80°33'6.7390"W	13153.49	136.560	0.69	
20691.00	89.820	134.030	7281.57	13225.64	-9617.43	9113.27	1766520.25	14420106.35	39°42'22.7094"N	80°33'5.8603"W	13249.40	136.542	0.17	
20788.00	89.510	133.390	7282.14	13322.63	-9684.45	9183.38	1766590.33	14420039.35	39°42'22.0435"N	80°33'4.9674"W	13346.28	136.521	0.73	
20884.00	89.690	134.060	7282.81	13418.62	-9750.81	9252.76	1766659.68	14419973.02	39°42'21.3843"N	80°33'4.0841"W	13442.16	136.501	0.72	
20981.00	89.630	134.520	7283.39	13515.60	-9818.54	9322.19	1766729.09	14419905.31	39°42'20.7115"N	80°33'3.2000"W	13539.09	136.485	0.48	
21077.00	89.570	133.940	7284.06	13611.58	-9885.50	9390.97	1766797.85	14419838.38	39°42'20.0464"N	80°33'2.3242"W	13635.01	136.470	0.61	
21174.00	89.630	134.350	7284.73	13708.56	-9953.06	9460.58	1766867.42	14419770.85	39°42'19.3753"N	80°33'1.4380"W	13731.93	136.453	0.43	
21270.00	90.800	134.170	7284.37	13804.54	-10020.06	9529.33	1766936.15	14419703.88	39°42'18.7097"N	80°33'0.5627"W	13827.86	136.438	1.23	
21367.00	89.050	135.550	7284.50	13901.49	-10088.47	9598.08	1767004.87	14419635.48	39°42'18.0302"N	80°32'59.6874"W	13924.81	136.427	2.30	
21464.00	91.290	133.330	7284.21	13998.45	-10156.38	9667.33	1767074.09	14419567.60	39°42'17.3557"N	80°32'58.8058"W	14021.74	136.413	3.25	
21561.00	89.880	132.880	7283.22	14095.44	-10222.66	9738.14	1767144.88	14419501.35	39°42'16.6971"N	80°32'57.9040"W	14118.58	136.390	1.53	
21657.00	89.260	132.870	7283.94	14191.44	-10287.97	9808.49	1767215.20	14419436.06	39°42'16.0481"N	80°32'57.0081"W	14214.39	136.367	0.65	
21754.00	92.060	133.860	7282.82	14288.42	-10354.57	9879.00	1767285.68	14419369.49	39°42'15.3865"N	80°32'56.1103"W	14311.24	136.346	3.06	
21850.00	89.450	133.050	7281.56	14384.40	-10420.58	9948.67	1767355.33	14419303.50	39°42'14.7306"N	80°32'55.2231"W	14407.10	136.327	2.85	
21872.00	89.570	133.450	7281.75	14406.40	-10435.66	9964.70	1767371.35	14419288.44	39°42'14.5809"N	80°32'55.0191"W	14429.07	136.322	1.90	
21897.00‡	89.570	133.450	7281.94	14431.40	-10452.85	9982.85	1767389.49	14419271.25	39°42'14.4101"N	80°32'54.7880"W	14454.04	136.318	0.00	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 6H
Field	Marshall	API	47051024630000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 6H AWB
Slot	6H		

HOLE & CASING SECTIONS - Ref Wellbore: Yocum MSH 6H AWB Ref Wellpath: Yocum MSH 6H awp Proj: 21897'									
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	554.00	528.00	26.00	554.00	0.00	0.00	-0.39	1.29
9.625in Casing	26.00	2650.00	2624.00	26.00	2619.01	0.00	0.00	-71.22	-314.65
5.5in Casing	26.00	27987.00	27961.00	26.00	N/A	0.00	0.00	N/A	N/A

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Yocum MSH 6H tully 2	6957.70	-373.32	-1161.18	1756249.77	14429346.88	39°43'54.5531"N	80°35'16.7766"W	point
Yocum MSH 6H tully 1	6959.70	-360.42	-745.59	1756665.20	14429359.78	39°43'54.6617"N	80°35'11.4565"W	point
1st perf on the Yocum MSH 1H	7097.70	-360.42	-745.59	1756665.20	14429359.78	39°43'54.6617"N	80°35'11.4565"W	ellipse
2D Ellipse radii 500 x 500.								
Yocum MSH 6H LP Rev 4	7121.00	-701.35	-511.50	1756899.20	14429018.98	39°43'51.2817"N	80°35'8.4804"W	point
Yocum MSH 6H BHL Rev 2	7285.00	-10447.22	9988.94	1767395.58	14419276.88	39°42'14.4654"N	80°32'54.7096"W	point

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Field	Marshall	API	47051024630000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 6H AWB
Slot	6H		

WELLPATH COMPOSITION - Ref Wellbore: Yocum MSH 6H AWB Ref Wellpath: Yocum MSH 6H awp Proj: 21897'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	552.00	OWSG MWD rev2 + HRGM	1 Tally OWSG MWD HRGM 17.5" 146' - 552'	Yocum MSH 6H AWB	2/12/2023
552.00	2638.00	OWSG MWD rev2 + HRGM	2 Tally OWSG MWD HRGM 12.25" 598' - 2638'	Yocum MSH 6H AWB	2/12/2023
2638.00	6294.00	OWSG MWD rev2 + HRGM	3 Tally OWSG MWD HRGM 8.75" 2730' - 6294'	Yocum MSH 6H AWB	2/14/2023
6294.00	21897.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	4 BH ATC HRGM Short spacing 8.5" 6396' - 21872'	Yocum MSH 6H AWB	2/14/2023

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