



SWN PRODUCTION COMPANY, LLC



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

Slot: 10H
Well: Yocum MSH 10H
Wellbore: Yocum MSH 10H AWB

Plot reference wellpath is Yocum MSH 10H AWP Proj: 21996

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: 10H): -1052.7 feet

Depths are in feet

Offset wellpath MDs are referenced to each path's default MD datum

Created by: tranlam on 2023-03-28; Database: WA_MPL_EASTERNUS_Defn

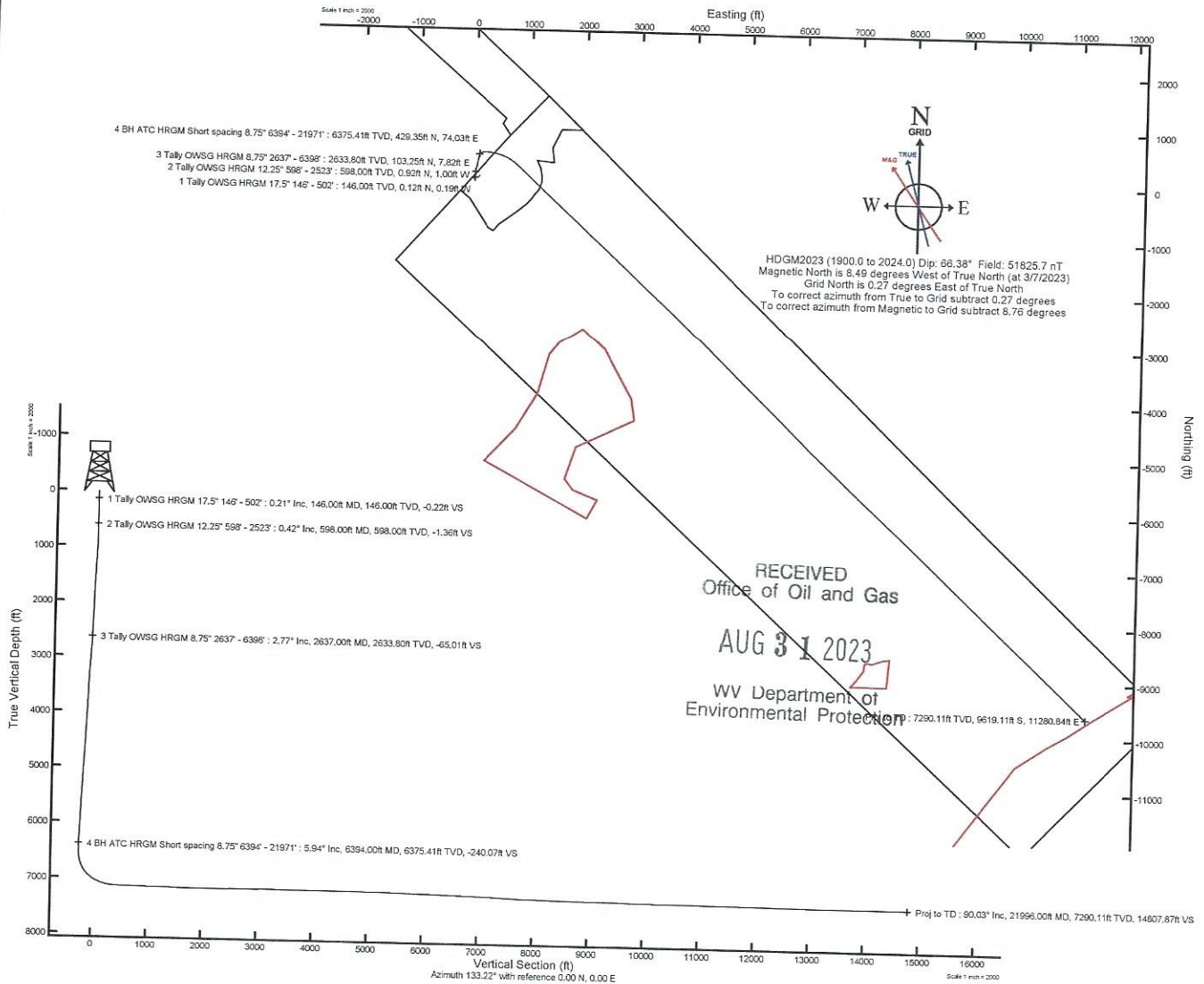
Location Information

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
10H	-52.11	-20.74		1757426.000	14429733.530	39°43'58.3219"N	80°35'1.6926"W
Comment: Updated SHL via asbuil, created NS plan							
SDC 41 (KB) to Ground level (At Slot: 10H)						26ft	
Mean Sea Level to Ground level (At Slot: 10H)						-1052.7ft	
SDC 41 (KB) to Mean Sea Level						1078.7ft	

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
21996.00	90.030	133.130	7290.11	-9619.11	11280.84	1768702.49	14420118.13	39°42'22.7171"N	80°32'37.9274"W

API: 4705102462000
 BH JOB: 111435779
 DURATION: 03.20.2023 to 03.24.2023
 RIG: SDC 41



03/15/2024

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 10H
Field	Marshall	API	47051024620000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 10H AWB
Slot	10H		

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	3/28/2023 at 2:09:53 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	-52.11	-20.74	1757426.00	14429733.53	39°43'58.3219"N	80°35'1.6926"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 (10H)	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	133.22°

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Actual Wellpath Report

Yocum MSH 10H AWP Proj: 21996'

Page 2 of 11



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Field	Marshall	API	47051024620000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 10H AWB
Slot	10H		

WELLPATH DATA (235 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	302.160	0.00	0.00	0.00	0.00	1757426.00	14429733.53	39°43'58.3219"N	80°35'1.6926"W	0.00	0.000	0.00	
26.00	0.000	302.160	26.00	0.00	0.00	0.00	1757426.00	14429733.53	39°43'58.3219"N	80°35'1.6926"W	0.00	0.000	0.00	
146.00	0.210	302.160	146.00	-0.22	0.12	-0.19	1757425.81	14429733.65	39°43'58.3231"N	80°35'1.6950"W	0.22	302.160	0.18	
238.00	0.310	310.940	238.00	-0.63	0.37	-0.52	1757425.48	14429733.90	39°43'58.3256"N	80°35'1.6992"W	0.64	305.587	0.12	
329.00	0.210	330.470	329.00	-1.04	0.68	-0.79	1757425.22	14429734.21	39°43'58.3287"N	80°35'1.7026"W	1.04	310.744	0.15	
421.00	0.260	299.160	421.00	-1.40	0.92	-1.05	1757424.95	14429734.45	39°43'58.3311"N	80°35'1.7060"W	1.40	311.357	0.15	
502.00	0.090	258.010	502.00	-1.61	1.00	-1.27	1757424.73	14429734.53	39°43'58.3319"N	80°35'1.7088"W	1.62	308.176	0.25	
598.00	0.420	100.830	598.00	-1.36	0.92	-1.00	1757425.00	14429734.45	39°43'58.3311"N	80°35'1.7054"W	1.36	312.553	0.53	
689.00	0.350	108.700	688.99	-0.82	0.77	-0.41	1757425.59	14429734.30	39°43'58.3295"N	80°35'1.6978"W	0.87	331.861	0.10	
781.00	0.680	44.770	780.99	-0.55	1.06	0.24	1757426.24	14429734.59	39°43'58.3325"N	80°35'1.6895"W	1.09	12.709	0.67	
873.00	1.500	346.590	872.98	-1.55	2.62	0.35	1757426.35	14429736.15	39°43'58.3479"N	80°35'1.6880"W	2.65	7.499	1.39	
964.00	2.190	327.240	963.93	-4.23	5.24	-0.87	1757425.13	14429738.77	39°43'58.3738"N	80°35'1.7034"W	5.32	350.563	1.01	
1056.00	2.810	333.970	1055.84	-8.04	8.75	-2.81	1757423.19	14429742.28	39°43'58.4085"N	80°35'1.7281"W	9.19	342.179	0.74	
1149.00	2.930	345.430	1148.72	-12.18	13.10	-4.41	1757421.59	14429746.62	39°43'58.4516"N	80°35'1.7483"W	13.82	341.389	0.63	
1240.00	3.220	352.690	1239.59	-16.12	17.88	-5.32	1757420.68	14429751.41	39°43'58.4989"N	80°35'1.7596"W	18.66	343.430	0.53	
1332.00	3.300	358.540	1331.45	-19.98	23.09	-5.72	1757420.28	14429756.62	39°43'58.5504"N	80°35'1.7644"W	23.79	346.095	0.37	
1424.00	3.770	358.860	1423.27	-23.96	28.77	-5.85	1757420.16	14429762.28	39°43'58.6065"N	80°35'1.7657"W	29.35	348.514	0.51	
1515.00	4.120	356.860	1514.05	-28.42	35.02	-6.08	1757419.92	14429768.54	39°43'58.6683"N	80°35'1.7684"W	35.54	350.145	0.41	
1607.00	4.450	359.310	1605.80	-33.28	41.89	-6.31	1757419.69	14429775.40	39°43'58.7362"N	80°35'1.7708"W	42.36	351.437	0.41	
1698.00	4.320	2.520	1696.53	-37.97	48.84	-6.20	1757419.80	14429782.35	39°43'58.8049"N	80°35'1.7690"W	49.24	352.766	0.31	
1791.00	3.570	18.390	1789.31	-41.47	55.09	-5.13	1757420.87	14429788.60	39°43'58.8666"N	80°35'1.7550"W	55.33	354.678	1.42	
1883.00	3.230	19.400	1881.15	-43.72	60.25	-3.37	1757422.63	14429793.76	39°43'58.9176"N	80°35'1.7321"W	60.35	356.801	0.38	
1974.00	3.440	14.090	1972.00	-46.08	65.32	-1.85	1757424.15	14429798.82	39°43'58.9676"N	80°35'1.7124"W	65.35	358.377	0.41	
2066.00	3.850	12.040	2063.81	-49.02	71.02	-0.53	1757425.47	14429804.52	39°43'59.0238"N	80°35'1.6952"W	71.02	359.568	0.47	
2158.00	3.980	21.370	2155.60	-51.81	77.01	1.27	1757427.27	14429810.51	39°43'59.0830"N	80°35'1.6717"W	77.02	0.947	0.71	
2251.00	3.730	23.320	2248.39	-54.04	82.79	3.65	1757429.64	14429816.29	39°43'59.1400"N	80°35'1.6410"W	82.88	2.522	0.30	
2341.00	3.510	21.060	2338.21	-56.08	88.05	5.80	1757431.79	14429821.55	39°43'59.1919"N	80°35'1.6132"W	88.24	3.765	0.29	
2431.00	3.040	16.310	2428.06	-58.20	92.92	7.46	1757433.45	14429826.41	39°43'59.2399"N	80°35'1.5916"W	93.21	4.588	0.60	
2523.00	2.940	1.490	2519.94	-60.87	97.62	8.20	1757434.20	14429831.11	39°43'59.2863"N	80°35'1.5818"W	97.96	4.803	0.84	
2637.00	2.770	350.490	2633.80	-65.01	103.25	7.82	1757433.82	14429836.75	39°43'59.3420"N	80°35'1.5863"W	103.55	4.333	0.50	



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Actual Wellpath Report

Yocum MSH 10H AWP Proj: 21996'

Page 3 of 11



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Field	Marshall	API	47051024620000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 10H AWB
Slot	10H		

WELLPATH DATA (235 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
2729.00	3.210	1.250	2725.67	-68.50	108.02	7.51	1757433.51	14429841.51	39°43'59.3892"N	80°35'1.5900"W	108.28	3.978	0.77	
2821.00	5.280	7.130	2817.41	-72.72	114.80	8.09	1757434.09	14429848.28	39°43'59.4561"N	80°35'1.5822"W	115.08	4.033	2.30	
2915.00	7.360	11.860	2910.84	-78.40	124.98	9.87	1757435.86	14429858.47	39°43'59.5567"N	80°35'1.5589"W	125.37	4.514	2.28	
3005.00	7.920	9.490	3000.04	-84.84	136.74	12.07	1757438.07	14429870.22	39°43'59.6728"N	80°35'1.5299"W	137.27	5.046	0.71	
3096.00	7.490	14.990	3090.22	-91.13	148.65	14.64	1757440.64	14429882.13	39°43'59.7904"N	80°35'1.4963"W	149.37	5.626	0.94	
3187.00	7.310	13.300	3180.46	-96.82	160.02	17.51	1757443.50	14429893.49	39°43'59.9025"N	80°35'1.4590"W	160.97	6.244	0.31	
3279.00	6.130	14.580	3271.83	-102.10	170.47	20.09	1757446.08	14429903.93	39°44'0.0057"N	80°35'1.4253"W	171.65	6.722	1.29	
3370.00	5.750	13.150	3362.34	-106.71	179.61	22.35	1757448.34	14429913.07	39°44'0.0959"N	80°35'1.3958"W	180.99	7.094	0.45	
3463.00	4.900	17.820	3454.94	-110.75	187.93	24.63	1757450.62	14429921.38	39°44'0.1780"N	80°35'1.3662"W	189.53	7.466	1.03	
3554.00	4.180	18.440	3545.65	-113.80	194.77	26.87	1757452.86	14429928.23	39°44'0.2456"N	80°35'1.3371"W	196.62	7.853	0.79	
3648.00	4.240	15.070	3639.40	-116.88	201.38	28.85	1757454.84	14429934.83	39°44'0.3108"N	80°35'1.3113"W	203.44	8.154	0.27	
3739.00	4.120	12.860	3730.15	-120.12	207.81	30.46	1757456.44	14429941.26	39°44'0.3743"N	80°35'1.2904"W	210.03	8.337	0.22	
3831.00	4.080	10.930	3821.92	-123.54	214.25	31.81	1757457.80	14429947.70	39°44'0.4378"N	80°35'1.2727"W	216.60	8.445	0.16	
3923.00	3.980	8.440	3913.69	-127.11	220.62	32.90	1757458.89	14429954.07	39°44'0.5008"N	80°35'1.2584"W	223.06	8.482	0.22	
4015.00	4.630	6.510	4005.43	-131.15	227.47	33.79	1757459.78	14429960.91	39°44'0.5684"N	80°35'1.2466"W	229.97	8.449	0.72	
4108.00	4.780	7.320	4098.12	-135.66	235.04	34.71	1757460.70	14429968.48	39°44'0.6432"N	80°35'1.2343"W	237.59	8.400	0.18	
4199.00	4.420	358.820	4188.83	-140.34	242.31	35.12	1757461.11	14429975.74	39°44'0.7150"N	80°35'1.2287"W	244.84	8.247	0.85	
4291.00	4.530	6.660	4280.55	-144.98	249.46	35.47	1757461.45	14429982.89	39°44'0.7857"N	80°35'1.2238"W	251.97	8.092	0.68	
4385.00	5.530	17.920	4374.19	-149.13	257.46	37.29	1757463.28	14429990.89	39°44'0.8646"N	80°35'1.1999"W	260.15	8.242	1.49	
4476.00	5.370	16.050	4464.77	-152.95	265.72	39.82	1757465.80	14429999.15	39°44'0.9462"N	80°35'1.1671"W	268.69	8.522	0.26	
4567.00	5.040	13.590	4555.40	-156.87	273.70	41.94	1757467.92	14430007.12	39°44'1.0249"N	80°35'1.1395"W	276.89	8.711	0.44	
4658.00	4.370	7.770	4646.09	-160.86	281.02	43.34	1757469.33	14430014.44	39°44'1.0972"N	80°35'1.1211"W	284.34	8.768	0.90	
4749.00	5.170	12.830	4736.78	-164.94	288.45	44.72	1757470.71	14430021.87	39°44'1.1706"N	80°35'1.1030"W	291.90	8.813	0.99	
4841.00	6.180	14.190	4828.32	-169.44	297.30	46.86	1757472.84	14430030.71	39°44'1.2579"N	80°35'1.0752"W	300.97	8.957	1.11	
4932.00	5.570	10.510	4918.85	-174.21	306.39	48.86	1757474.84	14430039.80	39°44'1.3476"N	80°35'1.0489"W	310.26	9.061	0.79	
5023.00	5.240	7.070	5009.44	-179.04	314.85	50.18	1757476.16	14430048.26	39°44'1.4312"N	80°35'1.0316"W	318.83	9.056	0.51	
5113.00	5.060	11.190	5099.08	-183.57	322.83	51.46	1757477.44	14430056.23	39°44'1.5100"N	80°35'1.0148"W	326.90	9.056	0.46	
5204.00	4.710	11.960	5189.75	-187.64	330.42	53.01	1757478.99	14430063.82	39°44'1.5849"N	80°35'0.9944"W	334.64	9.114	0.39	
5294.00	4.490	5.680	5279.46	-191.70	337.54	54.12	1757480.10	14430070.94	39°44'1.6552"N	80°35'0.9797"W	341.85	9.110	0.61	
5385.00	5.120	11.270	5370.14	-196.02	345.06	55.27	1757481.25	14430078.46	39°44'1.7296"N	80°35'0.9646"W	349.46	9.100	0.86	



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Actual Wellpath Report

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Page 4 of 11



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5479.00	4.970	14.520	5463.78	-200.20	353.12	57.11	1757483.09	14430086.51	39°44'1.8091"N	80°35'0.9406"W	357.71	9.187	0.34	
5569.00	4.550	10.590	5553.46	-204.00	360.40	58.74	1757484.72	14430093.79	39°44'1.8810"N	80°35'0.9192"W	365.16	9.258	0.59	
5660.00	4.890	13.460	5644.16	-207.87	367.72	60.31	1757486.29	14430101.11	39°44'1.9533"N	80°35'0.8988"W	372.64	9.314	0.45	
5750.00	4.960	13.490	5733.82	-211.70	375.24	62.11	1757488.09	14430108.62	39°44'2.0274"N	80°35'0.8753"W	380.34	9.399	0.08	
5841.00	4.580	10.220	5824.51	-215.63	382.64	63.67	1757489.65	14430116.02	39°44'2.1005"N	80°35'0.8548"W	387.90	9.448	0.51	
5931.00	4.930	15.330	5914.20	-219.40	389.90	65.33	1757491.31	14430123.28	39°44'2.1722"N	80°35'0.8332"W	395.34	9.512	0.61	
6023.00	4.810	17.310	6005.87	-222.93	397.40	67.53	1757493.50	14430130.78	39°44'2.2462"N	80°35'0.8046"W	403.10	9.644	0.22	
6113.00	4.060	12.550	6095.60	-226.21	404.11	69.34	1757495.31	14430137.49	39°44'2.3125"N	80°35'0.7810"W	410.02	9.737	0.93	
6205.00	4.980	7.850	6187.31	-230.18	411.25	70.59	1757496.57	14430144.62	39°44'2.3829"N	80°35'0.7645"W	417.26	9.740	1.08	
6298.00	5.730	11.120	6279.90	-234.98	419.80	72.04	1757498.01	14430153.17	39°44'2.4674"N	80°35'0.7455"W	425.94	9.738	0.87	
6394.00	5.940	12.390	6375.41	-240.07	429.35	74.03	1757500.00	14430162.72	39°44'2.5617"N	80°35'0.7195"W	435.69	9.783	0.26	
6483.00	7.130	41.670	6463.85	-242.58	437.98	78.69	1757504.66	14430171.34	39°44'2.6468"N	80°35'0.6593"W	444.99	10.186	3.92	
6574.00	11.590	67.210	6553.65	-239.02	445.75	90.89	1757516.85	14430179.11	39°44'2.7230"N	80°35'0.5028"W	454.92	11.524	6.59	
6666.00	18.630	79.510	6642.44	-226.54	452.01	113.89	1757539.85	14430185.37	39°44'2.7838"N	80°35'0.2079"W	466.14	14.142	8.37	
6757.00	26.930	81.800	6726.27	-205.05	457.61	148.64	1757574.58	14430190.96	39°44'2.8375"N	80°34'59.7628"W	481.14	17.995	9.17	
6847.00	34.610	88.710	6803.57	-174.06	461.10	194.45	1757620.37	14430194.45	39°44'2.8699"N	80°34'59.1762"W	500.42	22.866	9.38	
6940.00	43.070	95.650	6875.97	-129.95	458.56	252.59	1757678.49	14430191.91	39°44'2.8421"N	80°34'58.4322"W	523.52	28.847	10.22	
7031.00	50.850	98.430	6938.04	-76.26	450.31	318.52	1757744.40	14430183.67	39°44'2.7576"N	80°34'57.5888"W	551.58	35.273	8.83	
7124.00	57.340	102.740	6992.57	-12.82	436.37	392.48	1757818.32	14430169.74	39°44'2.6165"N	80°34'56.6430"W	586.91	41.968	7.92	
7216.00	63.500	107.950	7037.98	57.89	415.12	469.53	1757895.35	14430148.49	39°44'2.4028"N	80°34'55.6580"W	626.72	48.520	8.31	
7307.00	68.810	114.390	7074.79	134.99	385.00	547.03	1757972.81	14430118.38	39°44'2.1016"N	80°34'54.6678"W	668.93	54.862	8.71	
7398.00	74.900	120.450	7103.14	218.13	345.15	623.67	1758049.43	14430078.54	39°44'1.7042"N	80°34'53.6891"W	712.81	61.039	9.21	
7489.00	80.320	125.860	7122.67	305.58	296.54	698.00	1758123.73	14430029.96	39°44'1.2204"N	80°34'52.7406"W	758.38	66.982	8.32	
7581.00	86.240	131.500	7133.44	396.59	239.47	769.25	1758194.95	14429972.90	39°44'0.6531"N	80°34'51.8321"W	805.66	72.709	8.86	
7671.00	89.200	132.320	7137.02	486.48	179.40	836.16	1758261.84	14429912.86	39°44'0.0564"N	80°34'50.9792"W	855.19	77.891	3.41	
7763.00	89.380	133.150	7138.16	578.47	116.98	903.73	1758329.38	14429850.46	39°43'59.4364"N	80°34'50.1180"W	911.27	82.625	0.92	
7855.00	89.010	132.410	7139.45	670.46	54.50	971.25	1758396.87	14429788.01	39°43'58.8158"N	80°34'49.2576"W	972.78	86.788	0.90	
7946.00	88.460	133.160	7141.46	761.43	-7.30	1038.02	1758463.62	14429726.23	39°43'58.2020"N	80°34'48.4067"W	1038.04	90.403	1.02	
8038.00	87.690	132.100	7144.55	853.37	-69.57	1105.67	1758531.24	14429663.99	39°43'57.5834"N	80°34'47.5445"W	1107.85	93.600	1.42	
8129.00	89.570	132.180	7146.73	944.33	-130.61	1173.12	1758598.67	14429602.97	39°43'56.9771"N	80°34'46.6848"W	1180.37	96.353	2.07	



AUG 31 2023

WV Department of
Environmental Protection

Actual Wellpath Report

Yocum MSH 10H AWP Proj: 21996'

Page 5 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 10H
Field	Marshall	API	47051024620000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 10H AWB
Slot	10H		

WELLPATH DATA (235 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
8230.00	89.850	133.550	7147.24	1045.32	-199.31	1247.15	1758672.66	14429534.30	39°43'56.2947"N	80°34'45.7414"W	1262.97	99.080	1.38	
8326.00	88.770	132.180	7148.40	1141.31	-264.61	1317.50	1758742.99	14429469.02	39°43'55.6461"N	80°34'44.8448"W	1343.81	101.356	1.82	
8423.00	89.020	132.500	7150.27	1238.28	-329.93	1389.19	1758814.65	14429403.73	39°43'54.9972"N	80°34'43.9312"W	1427.83	103.360	0.42	
8519.00	88.800	132.560	7152.09	1334.25	-394.81	1459.92	1758885.36	14429338.87	39°43'54.3527"N	80°34'43.0297"W	1512.36	105.133	0.24	
8616.00	89.080	132.020	7153.89	1431.22	-460.07	1531.66	1758957.07	14429273.64	39°43'53.7045"N	80°34'42.1154"W	1599.27	106.719	0.63	
8712.00	88.490	132.480	7155.92	1527.19	-524.60	1602.71	1759028.09	14429209.13	39°43'53.0634"N	80°34'41.2099"W	1686.38	108.124	0.78	
8808.00	89.010	132.920	7158.02	1623.16	-589.69	1673.24	1759098.60	14429144.07	39°43'52.4169"N	80°34'40.3111"W	1774.11	109.414	0.71	
8904.00	89.260	132.250	7159.47	1719.14	-654.64	1743.92	1759169.24	14429079.14	39°43'51.7717"N	80°34'39.4104"W	1862.74	110.575	0.74	
9001.00	90.060	132.480	7160.04	1816.13	-720.01	1815.58	1759240.88	14429013.80	39°43'51.1224"N	80°34'38.4970"W	1953.14	111.632	0.86	
9098.00	89.320	131.550	7160.57	1913.11	-784.93	1887.65	1759312.92	14428948.91	39°43'50.4775"N	80°34'37.5785"W	2044.34	112.579	1.23	
9194.00	88.250	132.210	7162.60	2009.06	-849.00	1959.11	1759384.35	14428884.86	39°43'49.8409"N	80°34'36.6678"W	2135.16	113.430	1.31	
9291.00	91.540	133.930	7162.78	2106.04	-915.23	2029.96	1759455.17	14428818.66	39°43'49.1831"N	80°34'35.7650"W	2226.74	114.269	3.83	
9387.00	91.780	135.400	7160.00	2201.96	-982.68	2098.20	1759523.39	14428751.23	39°43'48.5133"N	80°34'34.8956"W	2316.92	115.096	1.55	
9484.00	89.750	129.010	7158.70	2298.89	-1047.80	2170.01	1759595.17	14428686.13	39°43'47.8664"N	80°34'33.9804"W	2409.74	115.774	6.91	
9580.00	90.550	132.360	7158.45	2394.78	-1110.37	2242.80	1759667.93	14428623.59	39°43'47.2446"N	80°34'33.0526"W	2502.61	116.339	3.59	
9677.00	91.320	132.470	7156.87	2491.75	-1175.79	2314.40	1759739.50	14428558.19	39°43'46.5948"N	80°34'32.1401"W	2595.94	116.932	0.80	
9774.00	91.260	132.380	7154.69	2588.72	-1241.21	2385.98	1759811.06	14428492.80	39°43'45.9449"N	80°34'31.2279"W	2689.52	117.484	0.11	
9871.00	89.600	131.970	7153.96	2685.70	-1306.33	2457.86	1759882.91	14428427.70	39°43'45.2979"N	80°34'30.3118"W	2783.45	117.990	1.76	
9967.00	89.940	131.880	7154.34	2781.67	-1370.48	2529.29	1759954.31	14428363.58	39°43'44.6607"N	80°34'29.4015"W	2876.72	118.451	0.37	
10064.00	90.280	132.510	7154.16	2878.66	-1435.63	2601.15	1760026.15	14428298.46	39°43'44.0134"N	80°34'28.4857"W	2971.03	118.895	0.74	
10160.00	90.030	132.420	7153.90	2974.65	-1500.44	2671.97	1760096.94	14428233.67	39°43'43.3696"N	80°34'27.5832"W	3064.43	119.316	0.28	
10257.00	90.280	131.710	7153.63	3071.63	-1565.43	2743.98	1760168.92	14428168.71	39°43'42.7240"N	80°34'26.6655"W	3159.11	119.705	0.78	
10353.00	89.910	133.470	7153.48	3167.62	-1630.39	2814.65	1760239.57	14428103.77	39°43'42.0786"N	80°34'25.7649"W	3252.76	120.082	1.87	
10450.00	90.060	133.440	7153.50	3264.62	-1697.11	2885.07	1760309.95	14428037.08	39°43'41.4160"N	80°34'24.8678"W	3347.21	120.466	0.16	
10547.00	89.510	132.790	7153.86	3361.61	-1763.40	2955.88	1760380.73	14427970.81	39°43'40.7575"N	80°34'23.9656"W	3441.92	120.819	0.88	
10643.00	90.000	133.050	7154.28	3457.61	-1828.77	3026.18	1760451.01	14427905.46	39°43'40.1081"N	80°34'23.0698"W	3535.84	121.145	0.58	
10740.00	89.450	132.950	7154.74	3554.61	-1894.93	3097.12	1760521.92	14427839.34	39°43'39.4510"N	80°34'22.1659"W	3630.82	121.460	0.58	
10837.00	89.690	133.130	7155.47	3651.61	-1961.13	3168.01	1760592.78	14427773.16	39°43'38.7934"N	80°34'21.2626"W	3725.90	121.759	0.31	
10933.00	90.060	132.900	7155.68	3747.60	-2026.62	3238.20	1760662.95	14427707.69	39°43'38.1429"N	80°34'20.3682"W	3820.10	122.040	0.45	
11030.00	89.690	133.040	7155.89	3844.60	-2092.73	3309.18	1760733.90	14427641.60	39°43'37.4862"N	80°34'19.4638"W	3915.38	122.309	0.41	



AUG 31 2023

WV Department of
Environmental Protection

Actual Wellpath Report

Yocum MSH 10H AWP Proj: 21996'

Page 6 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 10H
Field	Marshall	API	47051024620000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 10H AWB
Slot	10H		

WELLPATH DATA (235 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
11126.00	89.450	132.580	7156.61	3940.60	-2157.97	3379.60	1760804.30	14427576.39	39°43'36.8381"N	80°34'18.5665"W	4009.81	122.559	0.54	
11223.00	90.090	133.130	7157.00	4037.59	-2223.94	3450.71	1760875.38	14427510.45	39°43'36.1828"N	80°34'17.6604"W	4105.28	122.801	0.87	
11319.00	90.250	132.960	7156.71	4133.59	-2289.47	3520.87	1760945.51	14427444.94	39°43'35.5319"N	80°34'16.7665"W	4199.78	123.034	0.24	
11416.00	90.030	132.800	7156.48	4230.59	-2355.48	3591.95	1761016.56	14427378.96	39°43'34.8762"N	80°34'15.8609"W	4295.39	123.255	0.28	
11513.00	90.520	132.950	7156.01	4327.59	-2421.47	3663.03	1761087.62	14427312.99	39°43'34.2206"N	80°34'14.9551"W	4391.05	123.467	0.53	
11610.00	90.650	132.950	7155.02	4424.58	-2487.56	3734.03	1761158.58	14427246.93	39°43'33.5641"N	80°34'14.0505"W	4486.75	123.671	0.13	
11706.00	90.060	133.640	7154.43	4520.58	-2553.39	3803.90	1761228.43	14427181.12	39°43'32.9102"N	80°34'13.1604"W	4581.42	123.872	0.95	
11803.00	89.570	134.820	7154.74	4617.56	-2621.05	3873.40	1761297.90	14427113.49	39°43'32.2383"N	80°34'12.2750"W	4676.87	124.085	1.32	
11899.00	89.630	133.760	7155.41	4713.54	-2688.09	3942.11	1761366.59	14427046.48	39°43'31.5726"N	80°34'11.3996"W	4771.38	124.290	1.11	
11996.00	90.030	134.220	7155.70	4810.53	-2755.45	4011.90	1761436.35	14426979.14	39°43'30.9035"N	80°34'10.5106"W	4867.02	124.482	0.63	
12093.00	88.950	132.960	7156.56	4907.52	-2822.33	4082.15	1761506.58	14426912.29	39°43'30.2392"N	80°34'9.6156"W	4962.81	124.659	1.71	
12189.00	90.030	134.120	7157.42	5003.51	-2888.46	4151.74	1761576.13	14426846.19	39°43'29.5824"N	80°34'8.7291"W	5057.68	124.827	1.65	
12286.00	89.600	134.130	7157.73	5100.50	-2955.99	4221.37	1761645.73	14426778.68	39°43'28.9117"N	80°34'7.8422"W	5153.43	125.001	0.44	
12382.00	89.910	134.120	7158.14	5196.49	-3022.83	4290.28	1761714.62	14426711.87	39°43'28.2479"N	80°34'6.9644"W	5248.23	125.168	0.32	
12478.00	88.710	134.590	7159.30	5292.46	-3089.93	4358.91	1761783.23	14426644.79	39°43'27.5814"N	80°34'6.0901"W	5343.01	125.332	1.34	
12575.00	88.180	134.110	7161.93	5389.40	-3157.72	4428.25	1761852.54	14426577.03	39°43'26.9083"N	80°34'5.2069"W	5438.80	125.492	0.74	
12672.00	88.180	133.600	7165.01	5486.35	-3224.89	4498.16	1761922.42	14426509.89	39°43'26.2411"N	80°34'4.3163"W	5534.74	125.638	0.53	
12768.00	88.860	134.960	7167.49	5582.30	-3291.89	4566.86	1761991.10	14426442.92	39°43'25.5757"N	80°34'3.4411"W	5629.63	125.785	1.58	
12865.00	88.030	133.520	7170.12	5679.24	-3359.53	4636.33	1762060.54	14426375.30	39°43'24.9039"N	80°34'2.5563"W	5725.56	125.927	1.71	
12962.00	88.920	134.190	7172.70	5776.20	-3426.71	4706.25	1762130.43	14426308.14	39°43'24.2366"N	80°34'1.6656"W	5821.61	126.059	1.15	
13058.00	88.950	134.240	7174.49	5872.17	-3493.65	4775.04	1762199.20	14426241.23	39°43'23.5718"N	80°34'0.7893"W	5916.64	126.191	0.06	
13155.00	87.070	132.920	7177.85	5969.10	-3560.47	4845.26	1762269.39	14426174.43	39°43'22.9081"N	80°33'59.8948"W	6012.78	126.310	2.37	
13251.00	90.830	135.100	7179.61	6065.06	-3627.14	4914.28	1762338.38	14426107.79	39°43'22.2459"N	80°33'59.0157"W	6107.89	126.430	4.53	
13347.00	88.580	133.990	7180.11	6161.02	-3694.48	4982.69	1762406.77	14426040.48	39°43'21.5772"N	80°33'58.1443"W	6202.94	126.556	2.61	
13444.00	89.020	134.130	7182.14	6257.99	-3761.92	5052.38	1762476.43	14425973.06	39°43'20.9073"N	80°33'57.2566"W	6299.10	126.671	0.48	
13540.00	88.740	134.100	7184.02	6353.96	-3828.73	5121.29	1762545.31	14425906.28	39°43'20.2438"N	80°33'56.3788"W	6394.28	126.782	0.29	
13637.00	89.050	134.150	7185.89	6450.93	-3896.25	5190.91	1762614.90	14425838.78	39°43'19.5731"N	80°33'55.4921"W	6490.48	126.892	0.32	
13734.00	88.220	133.860	7188.20	6547.89	-3963.62	5260.66	1762684.62	14425771.44	39°43'18.9040"N	80°33'54.6036"W	6586.71	126.996	0.91	
13831.00	88.460	133.890	7191.01	6644.84	-4030.82	5330.55	1762754.49	14425704.26	39°43'18.2365"N	80°33'53.7133"W	6682.99	127.096	0.25	
13927.00	88.180	134.090	7193.82	6740.79	-4097.47	5399.59	1762823.50	14425637.64	39°43'17.5746"N	80°33'52.8339"W	6778.26	127.193	0.36	



AUG 31 2023

WV Department of
Environmental Protection

Actual Wellpath Report

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Page 7 of 11



REFERENCE WELLPATH IDENTIFICATION			
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Field	Marshall	API	47051024620000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 10H AWB
Slot	10H		

WELLPATH DATA (235 stations)														
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14024.00	88.060	133.800	7197.00	6837.73	-4164.75	5469.39	1762893.28	14425570.39	39°43'16.9063"N	80°33'51.9448"W	6874.55	127.288	0.32	
14120.00	88.770	133.520	7199.66	6933.69	-4231.00	5538.82	1762962.68	14425504.17	39°43'16.2483"N	80°33'51.0605"W	6969.92	127.376	0.79	
14217.00	88.090	134.290	7202.32	7030.65	-4298.24	5608.68	1763032.51	14425436.95	39°43'15.5804"N	80°33'50.1706"W	7066.27	127.465	1.06	
14314.00	87.510	134.250	7206.04	7127.56	-4365.90	5678.08	1763101.89	14425369.32	39°43'14.9084"N	80°33'49.2866"W	7162.52	127.557	0.60	
14410.00	88.680	135.380	7209.23	7223.47	-4433.52	5746.14	1763169.92	14425301.72	39°43'14.2368"N	80°33'48.4198"W	7257.70	127.653	1.69	
14507.00	87.040	133.920	7212.85	7320.36	-4501.64	5815.10	1763238.85	14425233.63	39°43'13.5603"N	80°33'47.5416"W	7353.92	127.745	2.26	
14604.00	87.200	133.850	7217.73	7417.23	-4568.80	5884.92	1763308.65	14425166.50	39°43'12.8933"N	80°33'46.6523"W	7450.25	127.824	0.18	
14700.00	87.140	133.960	7222.47	7513.11	-4635.29	5954.00	1763377.70	14425100.03	39°43'12.2328"N	80°33'45.7723"W	7545.60	127.901	0.13	
14797.00	87.470	134.260	7227.03	7609.99	-4702.73	6023.57	1763447.25	14425032.62	39°43'11.5630"N	80°33'44.8862"W	7641.93	127.980	0.46	
14894.00	89.110	136.190	7229.92	7706.88	-4771.55	6091.86	1763515.50	14424963.82	39°43'10.8795"N	80°33'44.0167"W	7738.11	128.070	2.61	
14990.00	88.460	135.240	7231.96	7802.77	-4840.26	6158.87	1763582.49	14424895.14	39°43'10.1973"N	80°33'43.1634"W	7833.25	128.164	1.20	
15087.00	88.580	131.010	7234.47	7899.71	-4906.53	6229.63	1763653.22	14424828.90	39°43'9.5389"N	80°33'42.2621"W	7929.83	128.224	4.36	
15183.00	89.600	132.950	7235.99	7995.67	-4970.73	6300.98	1763724.54	14424764.72	39°43'8.9010"N	80°33'41.3530"W	8025.61	128.269	2.28	
15280.00	89.050	133.300	7237.13	8092.66	-5037.03	6371.77	1763795.31	14424698.44	39°43'8.2424"N	80°33'40.4512"W	8122.26	128.327	0.67	
15377.00	89.660	133.390	7238.22	8189.66	-5103.61	6442.31	1763865.82	14424631.89	39°43'7.5810"N	80°33'39.5527"W	8218.89	128.386	0.64	
15473.00	88.890	133.110	7239.44	8285.65	-5169.38	6512.22	1763935.71	14424566.15	39°43'6.9276"N	80°33'38.6621"W	8314.54	128.442	0.85	
15570.00	88.860	132.540	7241.34	8382.63	-5235.30	6583.35	1764006.81	14424500.25	39°43'6.2727"N	80°33'37.7560"W	8411.24	128.493	0.59	
15666.00	89.140	132.940	7243.02	8478.61	-5300.45	6653.85	1764077.28	14424435.13	39°43'5.6255"N	80°33'36.8579"W	8506.96	128.541	0.51	
15762.00	88.680	133.170	7244.85	8574.59	-5365.97	6723.98	1764147.38	14424369.63	39°43'4.9745"N	80°33'35.9645"W	8602.65	128.591	0.54	
15859.00	88.890	133.500	7246.90	8671.57	-5432.52	6794.52	1764217.89	14424303.10	39°43'4.3133"N	80°33'35.0661"W	8699.30	128.644	0.40	
15955.00	89.080	133.860	7248.60	8767.55	-5498.81	6863.94	1764287.28	14424236.84	39°43'3.6549"N	80°33'34.1819"W	8794.92	128.699	0.42	
16052.00	89.540	132.290	7249.77	8864.54	-5565.05	6934.78	1764358.10	14424170.63	39°43'2.9968"N	80°33'33.2794"W	8891.63	128.746	1.69	
16149.00	89.570	133.600	7250.52	8961.53	-5631.14	7005.78	1764429.08	14424104.57	39°43'2.3403"N	80°33'32.3750"W	8988.37	128.792	1.35	
16246.00	89.720	130.580	7251.13	9058.50	-5696.15	7077.76	1764501.02	14424039.58	39°43'1.6943"N	80°33'31.4581"W	9085.19	128.827	3.12	
16342.00	90.180	131.770	7251.21	9154.44	-5759.35	7150.02	1764573.25	14423976.41	39°43'1.0662"N	80°33'30.5374"W	9181.11	128.851	1.33	
16439.00	88.770	132.100	7252.10	9251.41	-5824.17	7222.17	1764645.38	14423911.61	39°43'0.4221"N	80°33'29.6181"W	9277.97	128.884	1.49	
16535.00	89.020	132.000	7253.95	9347.37	-5888.45	7293.44	1764716.62	14423847.35	39°42'59.7833"N	80°33'28.7101"W	9373.80	128.916	0.28	
16632.00	89.450	132.190	7255.24	9444.34	-5953.47	7365.41	1764788.57	14423782.36	39°42'59.1372"N	80°33'27.7932"W	9470.65	128.949	0.48	
16728.00	88.830	132.180	7256.69	9540.31	-6017.93	7436.54	1764859.67	14423717.92	39°42'58.4967"N	80°33'26.8871"W	9566.48	128.981	0.65	
16825.00	88.740	131.770	7258.74	9637.27	-6082.79	7508.64	1764931.73	14423653.09	39°42'57.8522"N	80°33'25.9686"W	9663.33	129.011	0.43	



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Actual Wellpath Report

Yocum MSH 10H AWP Proj: 21996'

Page 8 of 11



REFERENCE WELLPATH IDENTIFICATION				
Operator	SWN PRODUCTION COMPANY, LLC		Well	Yocum MSH 10H
Field	Marshall		API	47051024620000
Facility	Yocum MSH Pad		Wellbore	Yocum MSH 10H AWB
Slot	10H			

WELLPATH DATA (235 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
16922.00	89.260	132.690	7260.44	9734.24	-6147.98	7580.45	1765003.52	14423587.93	39°42'57.2045"N	80°33'25.0538"W	9760.16	129.043	1.09	
17018.00	88.920	132.330	7261.96	9830.22	-6212.84	7651.21	1765074.25	14423523.09	39°42'56.5601"N	80°33'24.1525"W	9855.98	129.077	0.52	
17115.00	89.260	132.100	7263.50	9927.19	-6278.00	7723.04	1765146.05	14423457.95	39°42'55.9125"N	80°33'23.2374"W	9952.82	129.107	0.42	
17211.00	89.450	131.710	7264.58	10023.16	-6342.12	7794.48	1765217.47	14423393.86	39°42'55.2754"N	80°33'22.3272"W	10048.70	129.134	0.45	
17308.00	88.920	132.860	7265.96	10120.14	-6407.37	7866.23	1765289.19	14423328.63	39°42'54.6270"N	80°33'21.4132"W	10145.54	129.164	1.31	
17404.00	88.860	133.030	7267.82	10216.12	-6472.76	7936.49	1765359.43	14423263.27	39°42'53.9773"N	80°33'20.5182"W	10241.32	129.200	0.19	
17501.00	89.970	133.140	7268.81	10313.11	-6539.02	8007.33	1765430.24	14423197.04	39°42'53.3191"N	80°33'19.6160"W	10338.09	129.236	1.15	
17597.00	89.140	133.110	7269.56	10409.11	-6604.64	8077.40	1765500.27	14423131.44	39°42'52.6671"N	80°33'18.7236"W	10433.87	129.272	0.87	
17694.00	90.120	133.760	7270.18	10506.10	-6671.33	8147.83	1765570.68	14423064.78	39°42'52.0046"N	80°33'17.8265"W	10530.61	129.310	1.21	
17790.00	89.850	133.670	7270.21	10602.10	-6737.67	8217.22	1765640.04	14422998.46	39°42'51.3456"N	80°33'16.9428"W	10626.33	129.350	0.30	
17887.00	89.110	132.670	7271.09	10699.09	-6804.03	8287.96	1765710.76	14422932.13	39°42'50.6863"N	80°33'16.0418"W	10723.11	129.384	1.28	
17983.00	90.620	134.540	7271.31	10795.08	-6870.24	8357.47	1765780.24	14422865.95	39°42'50.0286"N	80°33'15.1566"W	10818.84	129.422	2.50	
18080.00	89.600	133.210	7271.13	10892.07	-6937.46	8427.39	1765850.13	14422798.75	39°42'49.3608"N	80°33'14.2661"W	10915.55	129.461	1.73	
18176.00	88.770	132.720	7272.49	10988.06	-7002.89	8497.63	1765920.35	14422733.35	39°42'48.7108"N	80°33'13.3715"W	11011.36	129.492	1.00	
18273.00	88.950	133.190	7274.42	11085.04	-7068.97	8568.61	1765991.30	14422667.29	39°42'48.0542"N	80°33'12.4674"W	11108.17	129.522	0.52	
18370.00	89.050	133.080	7276.12	11182.03	-7135.28	8639.38	1766062.04	14422601.01	39°42'47.3954"N	80°33'11.5660"W	11204.96	129.553	0.15	
18466.00	91.110	133.390	7275.98	11278.02	-7201.04	8709.32	1766131.95	14422535.28	39°42'46.7421"N	80°33'10.6753"W	11300.76	129.585	2.17	
18563.00	89.540	133.240	7275.43	11375.02	-7267.58	8779.89	1766202.50	14422468.76	39°42'46.0810"N	80°33'9.7765"W	11397.55	129.616	1.63	
18659.00	89.660	133.590	7276.10	11471.01	-7333.55	8849.62	1766272.21	14422402.81	39°42'45.4256"N	80°33'8.8884"W	11493.34	129.648	0.39	
18756.00	89.850	132.780	7276.52	11568.01	-7399.93	8920.35	1766342.90	14422336.45	39°42'44.7661"N	80°33'7.9876"W	11590.15	129.678	0.86	
18852.00	89.910	133.610	7276.72	11664.01	-7465.64	8990.34	1766412.86	14422270.77	39°42'44.1132"N	80°33'7.0963"W	11685.97	129.707	0.87	
18949.00	89.570	132.880	7277.16	11761.01	-7532.10	9060.99	1766483.49	14422204.34	39°42'43.4530"N	80°33'6.1965"W	11782.79	129.736	0.83	
19046.00	89.420	133.750	7278.01	11858.00	-7598.64	9131.57	1766554.04	14422137.83	39°42'42.7919"N	80°33'5.2977"W	11879.60	129.765	0.91	
19142.00	89.110	132.840	7279.25	11953.99	-7664.47	9201.43	1766623.88	14422072.03	39°42'42.1379"N	80°33'4.4079"W	11975.41	129.793	1.00	
19238.00	88.740	132.580	7281.05	12049.97	-7729.57	9271.96	1766694.38	14422006.95	39°42'41.4910"N	80°33'3.5096"W	12071.27	129.816	0.47	
19335.00	89.230	133.200	7282.76	12146.95	-7795.58	9343.02	1766765.41	14421940.97	39°42'40.8352"N	80°33'2.6046"W	12168.11	129.841	0.81	
19432.00	90.150	133.180	7283.29	12243.95	-7861.96	9413.74	1766836.10	14421874.60	39°42'40.1756"N	80°33'1.7040"W	12264.95	129.867	0.95	
19528.00	89.570	133.240	7283.52	12339.95	-7927.69	9483.70	1766906.04	14421808.90	39°42'39.5226"N	80°33'0.8129"W	12360.78	129.893	0.61	
19624.00	89.290	132.750	7284.48	12435.95	-7993.15	9553.92	1766976.23	14421743.46	39°42'38.8721"N	80°32'59.9187"W	12456.64	129.917	0.59	
19721.00	90.090	132.730	7285.00	12532.94	-8058.98	9625.16	1767047.44	14421677.66	39°42'38.2180"N	80°32'59.0114"W	12553.52	129.939	0.82	

REFERENCE WELLPATH IDENTIFICATION				
Operator	SWN PRODUCTION COMPANY, LLC		Well	Yocum MSH 10H
Field	Marshall		API	47051024620000
Facility	Yocum MSH Pad		Wellbore	Yocum MSH 10H AWB
Slot	10H			

WELLPATH DATA (235 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
19817.00	89.820	133.730	7285.08	12628.94	-8124.74	9695.10	1767117.36	14421611.93	39°42'37.5647"N	80°32'58.1206"W	12649.36	129.964	1.08	
19914.00	89.630	133.610	7285.54	12725.93	-8191.71	9765.26	1767187.49	14421544.98	39°42'36.8993"N	80°32'57.2271"W	12746.16	129.992	0.23	
20010.00	89.850	133.710	7285.98	12821.93	-8257.99	9834.71	1767256.91	14421478.73	39°42'36.2409"N	80°32'56.3428"W	12841.96	130.019	0.25	
20107.00	89.320	133.550	7286.68	12918.93	-8324.92	9904.92	1767327.09	14421411.83	39°42'35.5760"N	80°32'55.4487"W	12938.77	130.046	0.57	
20203.00	89.630	132.890	7287.56	13014.92	-8390.66	9974.88	1767397.02	14421346.12	39°42'34.9228"N	80°32'54.5579"W	13034.62	130.070	0.76	
20299.00	90.490	133.790	7287.46	13110.92	-8456.54	10044.69	1767466.81	14421280.26	39°42'34.2682"N	80°32'53.6687"W	13130.46	130.094	1.30	
20395.00	89.540	132.880	7287.44	13206.92	-8522.42	10114.52	1767536.61	14421214.40	39°42'33.6137"N	80°32'52.7796"W	13226.31	130.117	1.37	
20492.00	89.660	133.380	7288.11	13303.91	-8588.73	10185.31	1767607.37	14421148.11	39°42'32.9548"N	80°32'51.8781"W	13323.17	130.139	0.53	
20589.00	89.880	132.780	7288.50	13400.91	-8654.99	10256.16	1767678.19	14421081.89	39°42'32.2965"N	80°32'50.9758"W	13420.04	130.160	0.66	
20685.00	89.720	133.480	7288.84	13496.91	-8720.62	10326.22	1767748.23	14421016.28	39°42'31.6444"N	80°32'50.0836"W	13515.91	130.182	0.75	
20782.00	89.820	133.530	7289.23	13593.91	-8787.39	10396.57	1767818.55	14420949.53	39°42'30.9810"N	80°32'49.1877"W	13612.75	130.205	0.12	
20878.00	90.060	133.420	7289.33	13689.91	-8853.44	10466.24	1767888.19	14420883.51	39°42'30.3248"N	80°32'48.3006"W	13708.59	130.228	0.28	
20975.00	89.750	133.370	7289.49	13786.91	-8920.08	10536.72	1767958.65	14420816.89	39°42'29.6627"N	80°32'47.4031"W	13805.45	130.250	0.32	
21071.00	89.290	132.520	7290.29	13882.90	-8985.49	10606.99	1768028.89	14420751.52	39°42'29.0128"N	80°32'46.5082"W	13901.34	130.269	1.01	
21167.00	89.660	133.050	7291.17	13978.89	-9050.69	10677.44	1768099.32	14420686.34	39°42'28.3649"N	80°32'45.6110"W	13997.24	130.286	0.67	
21264.00	89.780	133.640	7291.65	14075.89	-9117.27	10747.98	1768169.83	14420619.78	39°42'27.7034"N	80°32'44.7127"W	14094.10	130.307	0.62	
21361.00	90.280	132.260	7291.60	14172.89	-9183.36	10818.98	1768240.80	14420553.72	39°42'27.0467"N	80°32'43.8086"W	14191.00	130.325	1.51	
21458.00	90.090	134.470	7291.28	14269.88	-9249.96	10889.49	1768311.28	14420487.14	39°42'26.3850"N	80°32'42.9107"W	14287.85	130.346	2.29	
21554.00	89.940	133.060	7291.26	14365.87	-9316.36	10958.82	1768380.59	14420420.77	39°42'25.7253"N	80°32'42.0280"W	14383.68	130.369	1.48	
21651.00	90.520	133.240	7290.87	14462.87	-9382.70	11029.59	1768451.33	14420354.46	39°42'25.0661"N	80°32'41.1268"W	14480.57	130.387	0.63	
21748.00	90.030	133.760	7290.40	14559.87	-9449.47	11099.95	1768521.66	14420287.71	39°42'24.4027"N	80°32'40.2309"W	14577.42	130.408	0.74	
21844.00	90.090	132.910	7290.30	14655.87	-9515.35	11169.77	1768591.46	14420221.86	39°42'23.7481"N	80°32'39.3418"W	14673.30	130.427	0.89	
21941.00	90.090	133.110	7290.15	14752.87	-9581.52	11240.70	1768662.36	14420155.72	39°42'23.0907"N	80°32'38.4386"W	14770.20	130.444	0.21	
21971.00	90.030	133.130	7290.12	14782.87	-9602.02	11262.60	1768684.25	14420135.22	39°42'22.8869"N	80°32'38.1597"W	14800.17	130.450	0.21	
21996.00‡	90.030	133.130	7290.11	14807.87	-9619.11	11280.84	1768702.49	14420118.13	39°42'22.7171"N	80°32'37.9274"W	14825.14	130.454	0.00	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 10H
Field	Marshall	API	47051024620000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 10H AWB
Slot	10H		

HOLE & CASING SECTIONS - Ref Wellbore: Yocum MSH 10H AWB Ref Wellpath: Yocum MSH 10H AWP Proj: 21996'									
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	0.97	-1.23
9.625in Casing	26.00	2600.00	2574.00	26.00	2596.84	0.00	0.00	101.47	8.06
5.5in Casing	26.00	21996.00	21970.00	26.00	7290.11	0.00	0.00	-9619.11	11280.84

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Yocum MSH 10H wp1tully 5above	6955.00	689.56	199.82	1757625.74	14430422.82	39°44'5.1274"N	80°34'59.0939"W	rectangle
	3D Rectangle 500 x 400 x 1.							
Yocum MSH 10H wp2tully 5above	6961.00	554.68	442.60	1757868.43	14430288.00	39°44'3.7834"N	80°34'55.9944"W	point
location of 1st perf on 5H	7094.00	582.93	451.54	1757877.37	14430316.23	39°44'4.0621"N	80°34'55.8782"W	rectangle
	3D Rectangle 500 x 1 x 500.							
Yocum MSH 10H LP Rev8	7136.00	228.66	803.79	1758229.48	14429962.10	39°44'0.5447"N	80°34'51.3906"W	point
Yocum MSH 10H BHL Rev 7	7298.00	-9618.26	11282.00	1768703.64	14420118.99	39°42'22.7255"N	80°32'37.9126"W	point

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Yocum MSH 10H
Field	Marshall	API	47051024620000
Facility	Yocum MSH Pad	Wellbore	Yocum MSH 10H AWB
Slot	10H		

WELLPATH COMPOSITION - Ref Wellbore: Yocum MSH 10H AWB Ref Wellpath: Yocum MSH 10H AWP Proj: 21996'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	502.00	OWSG MWD rev2 + HRGM	1 Tally OWSG HRGM 17.5" 146' - 502'	Yocum MSH 10H AWB	3/19/2023
502.00	2523.00	OWSG MWD rev2 + HRGM	2 Tally OWSG HRGM 12.25" 598' - 2523'	Yocum MSH 10H AWB	3/19/2023
2523.00	6298.00	OWSG MWD rev2 + HRGM	3 Tally OWSG HRGM 8.75" 2637' - 6398'	Yocum MSH 10H AWB	3/19/2023
6298.00	21996.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	4 BH ATC HRGM Short spacing 8.75" 6394' - 21971'	Yocum MSH 10H AWB	3/19/2023

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