



# EXPAND ENERGY



Location: Marshall County, WV

Slot: 206H

Field: Marshall WV

Well: Michael Southworth MSH 206H

Facility: Michael Southworth MSH Pad

Wellbore: Michael Southworth MSH 206H AWB

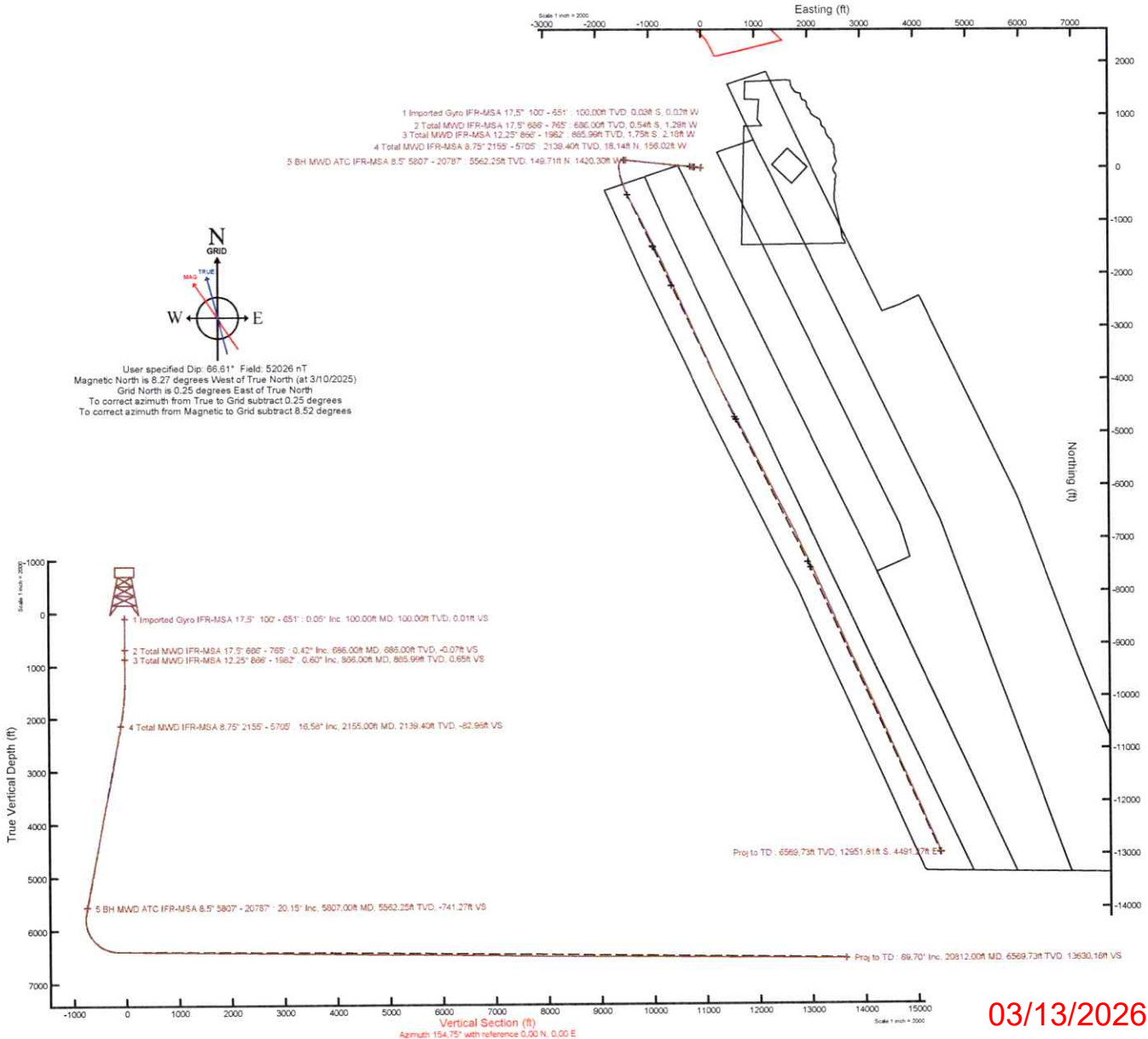
### Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Michael Southworth MSH Pad			1748280.060	14531637.500	40°00'46.1777"N	80°36'53.1795"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
206H	-53.05	-18.07	1748262.000	14531584.470	40°00'45.6542"N	80°36'53.4147"W
EDC 41 (RKB) to Ground level (At Slot: 206H)					26ft	
Mean Sea Level to Ground level (At Slot: 206H)					-1271.4ft	
EDC 41 (RKB) to Mean Sea Level					1297.4ft	
Plot reference wellpath is Michael Southworth MSH 206H awp Proj: 20812'				Grid System: NAD83 / UTM Zone 17 North, US feet		
True vertical depths are referenced to EDC 41 (RKB)				* = Wellpath was transformed from a different geodetic datum		
Reference wellpath measured depths are referenced to EDC 41 (RKB)				North Reference: Grid north		
EDC 41 (RKB) to Mean Sea Level: 1297.4 feet				Scale: True distance		
Mean Sea Level to Ground level (At Slot: 206H): -1271.4 feet				Coordinates are in feet referenced to Slot		
Offset wellpath MDs are referenced to each path's default MD datum				Depths are in feet		
				Created by: tranlam on 2025-03-17; Database: WA_MPL_EASTERNUS_Defn		

### 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
20812.00	89.700	155.770	6569.73	-12951.81	4491.27	1752751.53	14518637.70	39°58'37.4657"N	80°35'56.4422"W

API: 47-051-02521-00-00  
 BH JOB: 112553886  
 DURATION: 3/14/2025 - 3/16/2025  
 RIG: EDC 41





# Actual Wellpath Report

Michael Southworth MSH 206H awp Proj: 20812'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXPAND ENERGY	Well	Michael Southworth MSH 206H
Field	Marshall WV	API	47-051-02521-00-00
Facility	Michael Southworth MSH Pad	Wellbore	Michael Southworth MSH 206H AWB
Slot	206H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Tranlam
Scale	0.999613	Report Generated	3/17/2025 at 9:30:06 AM
Convergence at slot	0.25° East	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-53.05	-18.07	1748262.00	14531584.47	40°00'45.6542"N	80°36'53.4147"W
Facility Reference Pt			1748280.06	14531637.50	40°00'46.1777"N	80°36'53.1795"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM			
Calculation method	Minimum curvature	EDC 41 (RKB) to Facility Vertical Datum	1297.40ft
Horizontal Reference Pt	Slot	EDC 41 (RKB) to Mean Sea Level	1297.40ft
Vertical Reference Pt	EDC 41 (RKB)	EDC 41 (RKB) to Ground Level at Slot (206H)	26.00ft
MD Reference Pt	EDC 41 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	154.75°



# Actual Wellpath Report

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Field	Marshall WV	API	47-051-02521-00-00
Facility	Michael Southworth MSH Pad	Wellbore	Michael Southworth MSH 206H AWB
Slot	206H		

WELLPATH DATA (224 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]
0.00†	0.000	218.090	0.00	0.00	0.00	0.00	1748262.00	14531584.47	40°00'45.6542"N	80°36'53.4147"W	0.00	0.000	0.00
26.00	0.000	218.090	26.00	0.00	0.00	0.00	1748262.00	14531584.47	40°00'45.6542"N	80°36'53.4147"W	0.00	0.000	0.00
100.00	0.050	218.090	100.00	0.01	-0.03	-0.02	1748261.98	14531584.44	40°00'45.6539"N	80°36'53.4149"W	0.03	218.090	0.07
200.00	0.100	286.560	200.00	-0.02	-0.03	-0.13	1748261.87	14531584.44	40°00'45.6538"N	80°36'53.4164"W	0.14	255.033	0.09
300.00	0.090	287.340	300.00	-0.14	0.01	-0.29	1748261.71	14531584.48	40°00'45.6543"N	80°36'53.4184"W	0.29	272.654	0.01
400.00	0.050	300.440	400.00	-0.22	0.06	-0.40	1748261.60	14531584.53	40°00'45.6548"N	80°36'53.4198"W	0.41	278.344	0.04
500.00	0.110	232.670	500.00	-0.24	0.02	-0.52	1748261.48	14531584.49	40°00'45.6544"N	80°36'53.4213"W	0.52	272.533	0.10
600.00	0.300	245.250	600.00	-0.22	-0.15	-0.83	1748261.17	14531584.33	40°00'45.6528"N	80°36'53.4254"W	0.84	260.087	0.19
651.00	0.470	227.980	651.00	-0.16	-0.34	-1.11	1748260.89	14531584.13	40°00'45.6508"N	80°36'53.4289"W	1.16	252.873	0.40
686.00	0.420	219.380	686.00	-0.07	-0.54	-1.29	1748260.71	14531583.93	40°00'45.6489"N	80°36'53.4313"W	1.40	247.500	0.24
765.00	0.490	232.930	764.99	0.13	-0.96	-1.75	1748260.25	14531583.51	40°00'45.6447"N	80°36'53.4372"W	2.00	241.129	0.16
866.00	0.600	189.440	865.99	0.65	-1.75	-2.18	1748259.82	14531582.73	40°00'45.6370"N	80°36'53.4428"W	2.79	231.301	0.41
957.00	0.110	25.750	956.99	0.99	-2.14	-2.22	1748259.78	14531582.33	40°00'45.6331"N	80°36'53.4433"W	3.08	226.081	0.78
1048.00	1.070	337.180	1047.98	0.08	-1.28	-2.51	1748259.49	14531583.20	40°00'45.6417"N	80°36'53.4470"W	2.82	243.076	1.10
1138.00	0.720	353.820	1137.97	-1.29	0.06	-2.90	1748259.10	14531584.53	40°00'45.6549"N	80°36'53.4519"W	2.90	271.219	0.48
1229.00	1.120	268.270	1228.96	-2.19	0.60	-3.85	1748258.15	14531585.07	40°00'45.6603"N	80°36'53.4641"W	3.90	278.910	1.41
1319.00	3.640	275.110	1318.88	-3.98	0.83	-7.57	1748254.43	14531585.30	40°00'45.6627"N	80°36'53.5120"W	7.62	276.263	2.81
1411.00	5.180	272.760	1410.60	-7.41	1.29	-14.63	1748247.37	14531585.76	40°00'45.6676"N	80°36'53.6026"W	14.69	275.044	1.69
1502.00	7.260	269.530	1501.06	-11.75	1.44	-24.49	1748237.52	14531585.91	40°00'45.6695"N	80°36'53.7293"W	24.53	273.370	2.32
1592.00	7.770	273.970	1590.29	-17.10	1.82	-36.24	1748225.77	14531586.29	40°00'45.6737"N	80°36'53.8803"W	36.29	272.870	0.86
1683.00	8.550	279.370	1680.37	-23.95	3.34	-49.05	1748212.97	14531587.81	40°00'45.6893"N	80°36'54.0449"W	49.17	273.900	1.20
1775.00	10.560	281.540	1771.09	-32.88	6.14	-64.06	1748197.96	14531590.61	40°00'45.7176"N	80°36'54.2377"W	64.36	275.478	2.22
1865.00	12.740	280.940	1859.23	-43.68	9.68	-81.89	1748180.14	14531594.14	40°00'45.7533"N	80°36'54.4666"W	82.46	276.740	2.43
1958.00	14.290	277.450	1949.65	-55.94	13.11	-103.34	1748158.70	14531597.58	40°00'45.7882"N	80°36'54.7420"W	104.17	277.231	1.88
1982.00	14.880	276.890	1972.88	-59.18	13.87	-109.33	1748152.71	14531598.33	40°00'45.7959"N	80°36'54.8191"W	110.21	277.228	2.53
2155.00	16.580	273.740	2139.40	-82.96	18.14	-156.02	1748106.04	14531602.60	40°00'45.8401"N	80°36'55.4188"W	157.07	276.632	1.10
2248.00	18.330	278.860	2228.12	-97.60	21.26	-183.72	1748078.36	14531605.72	40°00'45.8721"N	80°36'55.7746"W	184.94	276.601	2.50
2339.00	19.650	280.890	2314.16	-114.64	26.35	-212.88	1748049.20	14531610.81	40°00'45.9237"N	80°36'56.1491"W	214.51	277.057	1.62
2430.00	19.920	277.560	2399.79	-132.07	31.28	-243.27	1748018.82	14531615.74	40°00'45.9737"N	80°36'56.5395"W	245.28	277.328	1.27
2522.00	20.520	273.250	2486.13	-148.26	34.26	-274.91	1747987.20	14531618.72	40°00'46.0045"N	80°36'56.9459"W	277.04	277.104	1.75



# Actual Wellpath Report

Michael Southworth MSH 206H awp Proj: 20812'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXPAND ENERGY	Well	Michael Southworth MSH 206H
Field	Marshall WV	API	47-051-02521-00-00
Facility	Michael Southworth MSH Pad	Wellbore	Michael Southworth MSH 206H AWB
Slot	206H		

WELLPATH DATA (224 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]
2612.00	20.760	271.040	2570.35	-162.85	35.44	-306.61	1747955.51	14531619.90	40°00'46.0175"N	80°36'57.3532"W	308.65	276.594	0.91
2703.00	20.950	269.140	2655.39	-176.71	35.49	-339.00	1747923.13	14531619.95	40°00'46.0194"N	80°36'57.7695"W	340.85	275.977	0.77
2794.00	20.450	270.230	2740.52	-190.27	35.31	-371.16	1747890.98	14531619.77	40°00'46.0190"N	80°36'58.1829"W	372.84	275.435	0.69
2884.00	19.300	274.990	2825.16	-204.52	36.67	-401.71	1747860.45	14531621.13	40°00'46.0337"N	80°36'58.5753"W	403.38	275.216	2.20
2975.00	18.190	275.940	2911.33	-219.45	39.45	-430.82	1747831.35	14531623.90	40°00'46.0624"N	80°36'58.9493"W	432.62	275.232	1.27
3065.00	19.380	275.950	2996.54	-234.46	42.45	-459.64	1747802.54	14531626.90	40°00'46.0933"N	80°36'59.3196"W	461.60	275.277	1.32
3157.00	19.580	278.320	3083.27	-250.89	46.26	-490.08	1747772.11	14531630.71	40°00'46.1322"N	80°36'59.7105"W	492.26	275.393	0.89
3250.00	19.190	275.880	3171.00	-267.41	50.08	-520.70	1747741.50	14531634.53	40°00'46.1713"N	80°37'0.1039"W	523.10	275.494	0.97
3341.00	19.830	276.890	3256.78	-283.36	53.47	-550.90	1747711.31	14531637.92	40°00'46.2060"N	80°37'0.4919"W	553.49	275.543	0.79
3432.00	21.730	279.640	3341.86	-301.21	58.14	-582.84	1747679.39	14531642.59	40°00'46.2536"N	80°37'0.9020"W	585.73	275.697	2.35
3522.00	21.490	278.050	3425.53	-319.79	63.24	-615.59	1747646.65	14531647.68	40°00'46.3053"N	80°37'1.3226"W	618.83	275.865	0.70
3613.00	22.160	279.250	3510.01	-338.66	68.33	-649.03	1747613.22	14531652.78	40°00'46.3571"N	80°37'1.7522"W	652.62	276.010	0.88
3703.00	21.920	277.440	3593.43	-357.35	73.24	-682.44	1747579.82	14531657.68	40°00'46.4070"N	80°37'2.1813"W	686.36	276.125	0.80
3794.00	21.340	275.140	3678.03	-374.90	76.92	-715.78	1747546.50	14531661.36	40°00'46.4448"N	80°37'2.6095"W	719.90	276.134	1.13
3884.00	21.160	275.380	3761.91	-391.46	79.91	-748.26	1747514.03	14531664.35	40°00'46.4757"N	80°37'3.0268"W	752.51	276.096	0.22
3975.00	20.970	275.160	3846.82	-408.07	82.91	-780.83	1747481.48	14531667.35	40°00'46.5068"N	80°37'3.4452"W	785.22	276.061	0.23
4066.00	20.990	275.250	3931.79	-424.58	85.87	-813.27	1747449.04	14531670.31	40°00'46.5374"N	80°37'3.8621"W	817.79	276.027	0.04
4156.00	20.490	275.910	4015.96	-440.91	88.97	-844.99	1747417.33	14531673.40	40°00'46.5693"N	80°37'4.2696"W	849.66	276.010	0.61
4249.00	20.590	275.360	4103.05	-457.66	92.17	-877.47	1747384.87	14531676.60	40°00'46.6023"N	80°37'4.6867"W	882.29	275.996	0.23
4341.00	20.490	275.420	4189.20	-474.11	95.20	-909.60	1747352.75	14531679.63	40°00'46.6337"N	80°37'5.0996"W	914.57	275.975	0.11
4431.00	20.620	274.080	4273.47	-489.91	97.82	-941.09	1747321.27	14531682.25	40°00'46.6608"N	80°37'5.5041"W	946.16	275.934	0.54
4522.00	21.040	276.550	4358.52	-506.37	100.82	-973.30	1747289.07	14531685.25	40°00'46.6919"N	80°37'5.9179"W	978.51	275.914	1.07
4612.00	20.450	276.540	4442.69	-523.17	104.45	-1004.98	1747257.41	14531688.88	40°00'46.7291"N	80°37'6.3248"W	1010.39	275.934	0.66
4703.00	20.810	276.100	4527.85	-539.95	107.98	-1036.84	1747225.56	14531692.41	40°00'46.7654"N	80°37'6.7341"W	1042.45	275.946	0.43
4794.00	20.690	276.290	4612.95	-556.77	111.46	-1068.90	1747193.52	14531695.89	40°00'46.8011"N	80°37'7.1459"W	1074.69	275.953	0.15
4885.00	20.730	276.280	4698.07	-573.60	114.98	-1100.88	1747161.55	14531699.41	40°00'46.8373"N	80°37'7.5568"W	1106.87	275.963	0.04
4976.00	20.360	275.320	4783.28	-590.07	118.21	-1132.65	1747129.79	14531702.64	40°00'46.8705"N	80°37'7.9649"W	1138.81	275.958	0.55
5069.00	20.230	276.400	4870.51	-606.74	121.51	-1164.74	1747097.71	14531705.93	40°00'46.9044"N	80°37'8.3771"W	1171.06	275.956	0.43
5160.00	20.450	277.660	4955.83	-623.63	125.38	-1196.13	1747066.33	14531709.80	40°00'46.9440"N	80°37'8.7804"W	1202.69	275.984	0.54
5251.00	21.050	276.490	5040.93	-640.87	129.35	-1228.13	1747034.35	14531713.77	40°00'46.9845"N	80°37'9.1913"W	1234.92	276.012	0.80



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Facility	Michael Southworth MSH Pad	Wellbore	Michael Southworth MSH 206H AWB
Slot	206H		

WELLPATH DATA (224 stations)													
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5341.00	20.890	275.650	5124.97	-657.61	132.75	-1260.15	1747002.34	14531717.17	40°00'47.0196"N	80°37'9.6028"W	1267.13	276.014	0.38
5432.00	20.380	276.010	5210.13	-674.16	136.01	-1292.06	1746970.44	14531720.43	40°00'47.0531"N	80°37'10.0126"W	1299.20	276.009	0.58
5523.00	19.940	276.020	5295.56	-690.44	139.29	-1323.25	1746939.27	14531723.71	40°00'47.0869"N	80°37'10.4133"W	1330.56	276.009	0.48
5613.00	20.240	276.160	5380.08	-706.52	142.57	-1353.99	1746908.54	14531726.99	40°00'47.1206"N	80°37'10.8082"W	1361.47	276.011	0.34
5705.00	20.040	277.460	5466.46	-723.33	146.33	-1385.44	1746877.10	14531730.74	40°00'47.1590"N	80°37'11.2122"W	1393.15	276.029	0.53
5807.00	20.150	273.640	5562.25	-741.27	149.71	-1420.30	1746842.25	14531734.13	40°00'47.1939"N	80°37'11.6601"W	1428.17	276.017	1.29
5898.00	20.620	273.780	5647.55	-756.61	151.77	-1451.93	1746810.63	14531736.18	40°00'47.2155"N	80°37'12.0665"W	1459.84	275.967	0.52
5988.00	17.890	257.550	5732.57	-767.38	149.83	-1481.27	1746781.30	14531734.24	40°00'47.1976"N	80°37'12.4436"W	1488.83	275.776	6.65
6078.00	18.240	234.720	5818.24	-767.99	138.70	-1506.30	1746756.29	14531723.11	40°00'47.0887"N	80°37'12.7659"W	1512.67	275.261	7.83
6178.00	21.520	208.950	5912.45	-754.50	113.56	-1528.00	1746734.59	14531697.98	40°00'46.8412"N	80°37'13.0462"W	1532.21	274.250	9.27
6273.00	26.380	194.120	5999.32	-727.95	77.79	-1541.60	1746721.00	14531662.23	40°00'46.4883"N	80°37'13.2230"W	1543.57	272.889	8.11
6370.00	31.850	178.120	6084.16	-687.71	31.20	-1546.03	1746716.57	14531615.66	40°00'46.0281"N	80°37'13.2824"W	1546.35	271.156	9.77
6466.00	39.850	173.860	6161.92	-635.30	-24.79	-1541.90	1746720.70	14531559.69	40°00'45.4745"N	80°37'13.2324"W	1542.10	269.079	8.72
6561.00	49.460	169.900	6229.44	-571.54	-90.76	-1532.29	1746730.30	14531493.74	40°00'44.8222"N	80°37'13.1125"W	1534.98	266.610	10.53
6656.00	57.950	164.320	6285.65	-496.82	-165.24	-1515.04	1746747.55	14531419.30	40°00'44.0855"N	80°37'12.8949"W	1524.03	263.776	10.11
6752.00	64.710	161.400	6331.69	-413.48	-245.65	-1490.17	1746772.41	14531338.92	40°00'43.2898"N	80°37'12.5797"W	1510.28	260.639	7.53
6848.00	72.990	161.630	6366.30	-324.65	-330.49	-1461.81	1746800.76	14531254.11	40°00'42.4502"N	80°37'12.2199"W	1498.71	257.261	8.63
6944.00	81.040	156.970	6387.86	-231.50	-417.87	-1428.73	1746833.83	14531166.76	40°00'41.5853"N	80°37'11.7994"W	1488.58	253.697	9.63
7040.00	88.440	153.010	6396.66	-135.99	-504.42	-1388.33	1746874.21	14531080.25	40°00'40.7283"N	80°37'11.2850"W	1477.12	250.032	8.73
7136.00	89.180	153.410	6398.65	-40.05	-590.10	-1345.07	1746917.45	14530994.60	40°00'39.8798"N	80°37'10.7338"W	1468.82	246.312	0.88
7232.00	89.210	153.520	6400.00	55.92	-675.98	-1302.19	1746960.32	14530908.76	40°00'39.0293"N	80°37'10.1873"W	1467.19	242.566	0.12
7328.00	88.160	151.760	6402.20	151.82	-761.21	-1258.08	1747004.41	14530823.56	40°00'38.1852"N	80°37'9.6252"W	1470.45	238.824	2.13
7423.00	88.500	151.500	6404.97	246.64	-844.76	-1212.96	1747049.51	14530740.03	40°00'37.3575"N	80°37'9.0499"W	1478.14	235.145	0.45
7519.00	89.110	152.850	6406.97	342.52	-929.64	-1168.16	1747094.29	14530655.19	40°00'36.5169"N	80°37'8.4788"W	1492.93	231.487	1.54
7615.00	89.140	153.090	6408.44	438.46	-1015.15	-1124.54	1747137.90	14530569.72	40°00'35.6700"N	80°37'7.9229"W	1514.96	227.927	0.25
7710.00	89.210	153.120	6409.81	533.41	-1099.86	-1081.57	1747180.85	14530485.03	40°00'34.8310"N	80°37'7.3754"W	1542.56	224.519	0.08
7807.00	89.180	152.750	6411.17	630.36	-1186.23	-1037.44	1747224.97	14530398.70	40°00'33.9757"N	80°37'6.8130"W	1575.89	221.172	0.38
7902.00	88.990	152.830	6412.69	725.29	-1270.71	-994.00	1747268.38	14530314.26	40°00'33.1390"N	80°37'6.2595"W	1613.30	218.034	0.22
7998.00	89.240	154.140	6414.17	821.25	-1356.60	-951.15	1747311.22	14530228.40	40°00'32.2884"N	80°37'5.7135"W	1656.82	215.035	1.39
8093.00	89.450	154.020	6415.26	916.24	-1442.04	-909.63	1747352.72	14530142.99	40°00'31.4423"N	80°37'5.1846"W	1704.96	212.244	0.25



# Actual Wellpath Report

Michael Southworth MSH 206H awp Proj: 20812'  
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### REFERENCE WELLPATH IDENTIFICATION

Operator	EXPAND ENERGY	Well	Michael Southworth MSH 206H
Field	Marshall WV	API	47-051-02521-00-00
Facility	Michael Southworth MSH Pad	Wellbore	Michael Southworth MSH 206H AWB
Slot	206H		

### WELLPATH DATA (224 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]
8189.00	89.450	154.230	6416.18	1012.23	-1528.41	-867.74	1747394.60	14530056.66	40°00'30.5870"N	80°37'4.6510"W	1757.55	209.585	0.22
8285.00	89.270	151.340	6417.25	1108.16	-1613.77	-823.84	1747438.48	14529971.33	40°00'29.7416"N	80°37'4.0915"W	1811.89	207.045	3.02
8380.00	89.300	153.580	6418.44	1203.07	-1697.99	-779.92	1747482.38	14529887.14	40°00'28.9075"N	80°37'3.5318"W	1868.54	204.670	2.36
8476.00	89.210	155.230	6419.68	1299.05	-1784.56	-738.45	1747523.83	14529800.60	40°00'28.0502"N	80°37'3.0037"W	1931.31	202.480	1.72
8571.00	88.990	153.890	6421.18	1394.04	-1870.34	-697.65	1747564.62	14529714.86	40°00'27.2008"N	80°37'2.4840"W	1996.21	200.456	1.43
8666.00	89.080	155.040	6422.78	1489.02	-1956.04	-656.71	1747605.55	14529629.19	40°00'26.3521"N	80°37'1.9626"W	2063.34	198.559	1.21
8762.00	89.240	155.410	6424.18	1585.01	-2043.20	-616.48	1747645.76	14529542.07	40°00'25.4891"N	80°37'1.4505"W	2134.18	196.790	0.42
8857.00	89.210	155.470	6425.47	1679.99	-2129.59	-577.00	1747685.23	14529455.70	40°00'24.6336"N	80°37'0.9479"W	2206.38	195.160	0.07
8952.00	88.990	155.270	6426.96	1774.98	-2215.94	-537.41	1747724.80	14529369.39	40°00'23.7787"N	80°37'0.4439"W	2280.18	193.632	0.31
9047.00	89.210	154.930	6428.45	1869.96	-2302.10	-497.42	1747764.77	14529283.27	40°00'22.9255"N	80°36'59.9347"W	2355.22	192.193	0.43
9143.00	89.390	155.130	6429.63	1965.95	-2389.12	-456.90	1747805.28	14529196.28	40°00'22.0639"N	80°36'59.4188"W	2432.41	190.827	0.28
9238.00	89.390	155.210	6430.64	2060.95	-2475.33	-417.00	1747845.16	14529110.10	40°00'21.2102"N	80°36'58.9109"W	2510.21	189.563	0.08
9334.00	89.390	155.620	6431.66	2156.93	-2562.62	-377.07	1747885.08	14529022.84	40°00'20.3458"N	80°36'58.4025"W	2590.22	188.370	0.43
9430.00	89.110	154.570	6432.92	2252.92	-2649.69	-336.64	1747925.49	14528935.81	40°00'19.4837"N	80°36'57.8879"W	2670.99	187.241	1.13
9525.00	89.210	155.170	6434.31	2347.91	-2735.69	-296.30	1747965.81	14528849.85	40°00'18.6322"N	80°36'57.3743"W	2751.69	186.182	0.64
9620.00	89.110	155.040	6435.70	2442.90	-2821.85	-256.32	1748005.78	14528763.72	40°00'17.7790"N	80°36'56.8652"W	2833.47	185.190	0.17
9716.00	89.240	155.030	6437.08	2538.89	-2908.87	-215.80	1748046.28	14528676.73	40°00'16.9173"N	80°36'56.3494"W	2916.86	184.243	0.14
9811.00	89.240	155.250	6438.34	2633.88	-2995.06	-175.87	1748086.20	14528590.57	40°00'16.0638"N	80°36'55.8410"W	3000.22	183.361	0.23
9907.00	89.270	155.160	6439.59	2729.87	-3082.20	-135.61	1748126.44	14528503.47	40°00'15.2010"N	80°36'55.3285"W	3085.18	182.519	0.10
10002.00	89.080	154.890	6440.96	2824.85	-3168.31	-95.51	1748166.53	14528417.39	40°00'14.3483"N	80°36'54.8179"W	3169.75	181.727	0.35
10097.00	89.180	154.960	6442.40	2919.84	-3254.35	-55.25	1748206.77	14528331.39	40°00'13.4964"N	80°36'54.3054"W	3254.82	180.973	0.13
10193.00	88.990	155.060	6443.94	3015.83	-3341.35	-14.70	1748247.31	14528244.42	40°00'12.6349"N	80°36'53.7891"W	3341.38	180.252	0.22
10288.00	89.170	154.800	6445.46	3110.82	-3427.39	25.55	1748287.54	14528158.41	40°00'11.7829"N	80°36'53.2767"W	3427.48	179.573	0.33
10383.00	89.180	155.030	6446.83	3205.81	-3513.42	65.82	1748327.80	14528072.42	40°00'10.9310"N	80°36'52.7640"W	3514.03	178.927	0.24
10479.00	89.390	155.630	6448.03	3301.79	-3600.65	105.89	1748367.85	14527985.22	40°00'10.0673"N	80°36'52.2540"W	3602.21	178.316	0.66
10576.00	89.300	156.390	6449.14	3398.76	-3689.26	145.32	1748407.27	14527896.64	40°00'9.1899"N	80°36'51.7522"W	3692.12	177.744	0.79
10672.00	89.390	159.910	6450.23	3494.57	-3778.35	181.04	1748442.97	14527807.59	40°00'8.3080"N	80°36'51.2981"W	3782.68	177.257	3.67
10767.00	89.110	154.960	6451.48	3589.43	-3866.04	217.48	1748479.40	14527719.93	40°00'7.4398"N	80°36'50.8347"W	3872.15	176.780	5.22
10863.00	89.360	155.860	6452.76	3685.42	-3953.32	257.43	1748519.33	14527632.68	40°00'6.5756"N	80°36'50.3263"W	3961.70	176.274	0.97
10958.00	89.300	154.590	6453.87	3780.40	-4039.57	297.24	1748559.12	14527546.47	40°00'5.7215"N	80°36'49.8196"W	4050.49	175.792	1.34



# Actual Wellpath Report

Michael Southworth MSH 206H awp Proj: 20812'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXPAND ENERGY	Well	Michael Southworth MSH 206H
Field	Marshall WV	API	47-051-02521-00-00
Facility	Michael Southworth MSH Pad	Wellbore	Michael Southworth MSH 206H AWB
Slot	206H		

## WELLPATH DATA (224 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]
11055.00	88.960	152.140	6455.34	3877.36	-4126.26	340.71	1748602.58	14527459.81	40°00'4.8630"N	80°36'49.2658"W	4140.30	175.280	2.55
11150.00	89.080	151.950	6456.97	3972.24	-4210.16	385.24	1748647.09	14527375.94	40°00'4.0319"N	80°36'48.6983"W	4227.75	174.772	0.24
11246.00	89.080	152.070	6458.51	4068.11	-4294.92	430.29	1748692.12	14527291.21	40°00'3.1924"N	80°36'48.1241"W	4316.43	174.279	0.12
11341.00	89.050	152.800	6460.06	4163.02	-4379.13	474.24	1748736.06	14527207.04	40°00'2.3584"N	80°36'47.5640"W	4404.73	173.819	0.77
11436.00	89.240	152.800	6461.48	4257.96	-4463.61	517.66	1748779.46	14527122.59	40°00'1.5216"N	80°36'47.0108"W	4493.53	173.385	0.20
11532.00	88.960	152.570	6462.99	4353.88	-4548.90	561.71	1748823.49	14527037.34	40°00'0.6769"N	80°36'46.4496"W	4583.45	172.961	0.38
11628.00	89.110	152.860	6464.60	4449.81	-4634.21	605.71	1748867.48	14526952.07	39°59'59.8320"N	80°36'45.8889"W	4673.62	172.553	0.34
11724.00	89.080	152.530	6466.12	4545.74	-4719.50	649.74	1748911.49	14526866.81	39°59'58.9872"N	80°36'45.3279"W	4764.01	172.161	0.35
11820.00	89.080	152.930	6467.66	4641.66	-4804.82	693.72	1748955.45	14526781.52	39°59'58.1422"N	80°36'44.7675"W	4854.64	171.784	0.42
11916.00	88.990	152.930	6469.28	4737.60	-4890.29	737.41	1748999.12	14526696.08	39°59'57.2957"N	80°36'44.2110"W	4945.57	171.425	0.09
12011.00	89.270	152.780	6470.72	4832.54	-4974.82	780.74	1749042.44	14526611.59	39°59'56.4585"N	80°36'43.6589"W	5035.71	171.081	0.33
12107.00	89.110	152.910	6472.08	4928.48	-5060.23	824.55	1749086.23	14526526.21	39°59'55.6126"N	80°36'43.1007"W	5126.96	170.745	0.21
12203.00	89.020	153.060	6473.64	5024.42	-5145.74	868.15	1749129.82	14526440.73	39°59'54.7656"N	80°36'42.5453"W	5218.46	170.424	0.18
12298.00	89.180	152.890	6475.14	5119.36	-5230.36	911.31	1749172.96	14526356.15	39°59'53.9276"N	80°36'41.9955"W	5309.15	170.116	0.25
12394.00	89.420	151.990	6476.31	5215.27	-5315.45	955.73	1749217.36	14526271.08	39°59'53.0847"N	80°36'41.4296"W	5400.69	169.807	0.97
12491.00	89.510	152.470	6477.21	5312.18	-5401.28	1000.92	1749262.53	14526185.29	39°59'52.2346"N	80°36'40.8537"W	5493.24	169.502	0.50
12586.00	89.450	153.120	6478.08	5407.12	-5485.77	1044.35	1749305.94	14526100.84	39°59'51.3978"N	80°36'40.3004"W	5584.29	169.221	0.69
12682.00	89.510	152.760	6478.95	5503.06	-5571.25	1088.02	1749349.60	14526015.38	39°59'50.5511"N	80°36'39.7440"W	5676.50	168.950	0.38
12778.00	89.540	153.340	6479.74	5599.02	-5656.82	1131.53	1749393.09	14525929.84	39°59'49.7036"N	80°36'39.1898"W	5768.88	168.688	0.60
12873.00	89.300	152.800	6480.71	5693.97	-5741.52	1174.55	1749436.09	14525845.18	39°59'48.8648"N	80°36'38.6418"W	5860.43	168.438	0.62
12969.00	89.270	153.170	6481.90	5789.92	-5827.04	1218.15	1749479.68	14525759.70	39°59'48.0178"N	80°36'38.0863"W	5953.00	168.192	0.39
13064.00	89.210	152.970	6483.16	5884.87	-5911.73	1261.17	1749522.68	14525675.04	39°59'47.1790"N	80°36'37.5383"W	6044.76	167.957	0.22
13160.00	89.240	152.740	6484.46	5980.81	-5997.14	1304.97	1749566.46	14525589.66	39°59'46.3330"N	80°36'36.9804"W	6137.48	167.724	0.24
13256.00	89.140	152.970	6485.82	6076.75	-6082.56	1348.76	1749610.24	14525504.27	39°59'45.4870"N	80°36'36.4225"W	6230.31	167.497	0.26
13352.00	89.170	152.960	6487.23	6172.69	-6168.06	1392.40	1749653.85	14525418.80	39°59'44.6402"N	80°36'35.8667"W	6323.27	167.279	0.03
13447.00	89.180	152.900	6488.60	6267.63	-6252.65	1435.62	1749697.07	14525334.25	39°59'43.8024"N	80°36'35.3160"W	6415.34	167.069	0.06
13543.00	89.050	151.980	6490.09	6363.54	-6337.74	1480.03	1749741.46	14525249.19	39°59'42.9596"N	80°36'34.7502"W	6508.26	166.855	0.97
13639.00	89.300	152.810	6491.47	6459.45	-6422.80	1524.51	1749785.92	14525164.16	39°59'42.1170"N	80°36'34.1835"W	6601.25	166.647	0.90
13735.00	89.240	152.970	6492.69	6555.39	-6508.25	1568.26	1749829.65	14525078.75	39°59'41.2708"N	80°36'33.6262"W	6694.53	166.452	0.18
13831.00	89.330	152.760	6493.89	6651.33	-6593.68	1612.04	1749873.41	14524993.36	39°59'40.4246"N	80°36'33.0685"W	6787.88	166.262	0.24



# Actual Wellpath Report

Michael Southworth MSH 206H awp Proj: 20812'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXPAND ENERGY	Well	Michael Southworth MSH 206H
Field	Marshall WV	API	47-051-02521-00-00
Facility	Michael Southworth MSH Pad	Wellbore	Michael Southworth MSH 206H AWB
Slot	206H		

## WELLPATH DATA (224 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]
13926.00	89.180	152.090	6495.12	6746.24	-6677.88	1656.01	1749917.37	14524909.19	39°59'39.5907"N	80°36'32.5083"W	6880.15	166.072	0.72
14022.00	89.300	153.120	6496.40	6842.17	-6763.10	1700.18	1749961.52	14524823.99	39°59'38.7465"N	80°36'31.9456"W	6973.53	165.889	1.08
14117.00	88.990	153.620	6497.81	6937.13	-6848.02	1742.75	1750004.08	14524739.12	39°59'37.9055"N	80°36'31.4034"W	7066.29	165.722	0.62
14213.00	89.180	155.050	6499.35	7033.11	-6934.53	1784.33	1750045.63	14524652.63	39°59'37.0488"N	80°36'30.8741"W	7160.42	165.570	1.50
14308.00	89.020	155.900	6500.84	7128.09	-7020.95	1823.75	1750085.05	14524566.25	39°59'36.1931"N	80°36'30.3724"W	7253.95	165.439	0.91
14404.00	89.360	153.730	6502.20	7224.07	-7107.81	1864.60	1750125.88	14524479.42	39°59'35.3329"N	80°36'29.8525"W	7348.31	165.301	2.29
14499.00	89.080	154.280	6503.49	7319.06	-7193.19	1906.23	1750167.49	14524394.08	39°59'34.4874"N	80°36'29.3224"W	7441.49	165.157	0.65
14595.00	88.990	154.000	6505.11	7415.04	-7279.56	1948.10	1750209.34	14524307.73	39°59'33.6320"N	80°36'28.7894"W	7535.73	165.018	0.31
14691.00	88.810	153.170	6506.95	7511.00	-7365.53	1990.80	1750252.03	14524221.81	39°59'32.7806"N	80°36'28.2456"W	7629.83	164.875	0.88
14786.00	88.960	153.460	6508.80	7605.95	-7450.39	2033.45	1750294.66	14524136.98	39°59'31.9401"N	80°36'27.7024"W	7722.90	164.734	0.34
14882.00	89.180	153.930	6510.36	7701.92	-7536.44	2075.99	1750337.18	14524050.96	39°59'31.0879"N	80°36'27.1608"W	7817.14	164.599	0.54
14977.00	89.210	154.060	6511.69	7796.91	-7621.81	2117.64	1750378.82	14523965.62	39°59'30.2424"N	80°36'26.6305"W	7910.52	164.473	0.14
15072.00	89.300	156.400	6512.93	7891.89	-7708.06	2157.44	1750418.60	14523879.41	39°59'29.3884"N	80°36'26.1241"W	8004.29	164.363	2.46
15168.00	89.510	156.130	6513.92	7987.85	-7795.93	2196.07	1750457.22	14523791.57	39°59'28.5183"N	80°36'25.6326"W	8099.34	164.268	0.36
15263.00	89.140	155.680	6515.04	8082.82	-7882.65	2234.86	1750495.99	14523704.88	39°59'27.6597"N	80°36'25.1393"W	8193.33	164.171	0.61
15359.00	88.990	155.840	6516.61	8178.79	-7970.17	2274.26	1750535.38	14523617.39	39°59'26.7930"N	80°36'24.6379"W	8288.30	164.074	0.23
15454.00	89.300	156.150	6518.03	8273.76	-8056.95	2312.91	1750574.01	14523530.65	39°59'25.9338"N	80°36'24.1464"W	8382.36	163.983	0.46
15550.00	89.540	156.140	6519.00	8369.73	-8144.74	2351.73	1750612.82	14523442.89	39°59'25.0645"N	80°36'23.6526"W	8477.47	163.894	0.25
15646.00	89.390	155.820	6519.90	8465.70	-8232.42	2390.81	1750651.88	14523355.25	39°59'24.1963"N	80°36'23.1555"W	8572.56	163.806	0.37
15741.00	89.540	156.350	6520.78	8560.67	-8319.26	2429.32	1750690.37	14523268.44	39°59'23.3365"N	80°36'22.6657"W	8666.70	163.722	0.58
15837.00	89.420	155.750	6521.65	8656.64	-8406.99	2468.28	1750729.32	14523180.74	39°59'22.4678"N	80°36'22.1700"W	8761.85	163.638	0.64
15933.00	89.640	156.120	6522.44	8752.62	-8494.65	2507.43	1750768.45	14523093.12	39°59'21.5999"N	80°36'21.6721"W	8856.99	163.555	0.45
16028.00	89.580	156.360	6523.09	8847.58	-8581.59	2545.70	1750806.71	14523006.21	39°59'20.7390"N	80°36'21.1853"W	8951.22	163.477	0.26
16123.00	89.420	155.830	6523.92	8942.55	-8668.44	2584.20	1750845.19	14522919.40	39°59'19.8791"N	80°36'20.6956"W	9045.44	163.400	0.58
16219.00	89.420	155.480	6524.89	9038.54	-8755.90	2623.77	1750884.75	14522831.97	39°59'19.0130"N	80°36'20.1922"W	9140.57	163.319	0.36
16315.00	89.670	156.530	6525.65	9134.51	-8843.60	2662.81	1750923.77	14522744.31	39°59'18.1447"N	80°36'19.6957"W	9235.79	163.243	1.12
16411.00	89.580	156.330	6526.28	9230.47	-8931.59	2701.19	1750962.14	14522656.35	39°59'17.2735"N	80°36'19.2075"W	9331.12	163.173	0.23
16506.00	89.420	155.760	6527.11	9325.44	-9018.40	2739.76	1751000.70	14522569.57	39°59'16.4139"N	80°36'18.7169"W	9425.38	163.101	0.62
16603.00	89.420	155.790	6528.09	9422.42	-9106.86	2779.56	1751040.48	14522481.15	39°59'15.5380"N	80°36'18.2107"W	9521.60	163.027	0.03
16698.00	89.360	155.790	6529.10	9517.40	-9193.49	2818.52	1751079.42	14522394.55	39°59'14.6801"N	80°36'17.7151"W	9615.84	162.956	0.06





# Actual Wellpath Report

Michael Southworth MSH 206H awp Proj: 20812'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXPAND ENERGY	Well	Michael Southworth MSH 206H
Field	Marshall WV	API	47-051-02521-00-00
Facility	Michael Southworth MSH Pad	Wellbore	Michael Southworth MSH 206H AWB
Slot	206H		

WELLPATH DATA (224 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]
16793.00	89.450	155.950	6530.09	9612.37	-9280.19	2857.35	1751118.24	14522307.89	39°59'13.8217"N	80°36'17.2211"W	9710.12	162.886	0.19
16889.00	89.610	155.970	6530.88	9708.35	-9367.86	2896.46	1751157.33	14522220.25	39°59'12.9536"N	80°36'16.7237"W	9805.42	162.819	0.17
16984.00	89.540	155.990	6531.58	9803.32	-9454.63	2935.13	1751195.99	14522133.51	39°59'12.0944"N	80°36'16.2319"W	9899.75	162.753	0.08
17079.00	89.330	156.060	6532.52	9898.29	-9541.43	2973.73	1751234.57	14522046.75	39°59'11.2349"N	80°36'15.7409"W	9994.10	162.690	0.23
17174.00	89.080	155.780	6533.84	9993.27	-9628.15	3012.49	1751273.32	14521960.06	39°59'10.3762"N	80°36'15.2480"W	10088.43	162.626	0.40
17270.00	89.270	156.100	6535.22	10089.23	-9715.80	3051.62	1751312.43	14521872.44	39°59'9.5083"N	80°36'14.7502"W	10183.77	162.563	0.39
17365.00	89.270	156.100	6536.43	10184.20	-9802.65	3090.11	1751350.91	14521785.63	39°59'8.6484"N	80°36'14.2607"W	10278.17	162.503	0.00
17461.00	89.390	155.920	6537.55	10280.17	-9890.35	3129.13	1751389.92	14521697.96	39°59'7.7800"N	80°36'13.7644"W	10373.55	162.444	0.23
17556.00	89.540	156.050	6538.44	10375.14	-9977.13	3167.80	1751428.56	14521611.22	39°59'6.9207"N	80°36'13.2726"W	10467.95	162.385	0.21
17652.00	89.210	156.000	6539.49	10471.12	-10064.84	3206.80	1751467.56	14521523.55	39°59'6.0522"N	80°36'12.7766"W	10563.36	162.327	0.35
17747.00	89.360	156.000	6540.67	10566.09	-10151.62	3245.44	1751506.18	14521436.80	39°59'5.1930"N	80°36'12.2852"W	10657.78	162.271	0.16
17842.00	89.300	156.040	6541.78	10661.06	-10238.41	3284.05	1751544.77	14521350.04	39°59'4.3335"N	80°36'11.7941"W	10752.21	162.216	0.08
17939.00	89.300	156.170	6542.97	10758.02	-10327.09	3323.33	1751584.04	14521261.39	39°59'3.4555"N	80°36'11.2945"W	10848.66	162.161	0.13
18034.00	89.450	156.080	6544.00	10852.99	-10413.96	3361.78	1751622.48	14521174.56	39°59'2.5953"N	80°36'10.8055"W	10943.13	162.109	0.18
18130.00	89.210	155.930	6545.13	10948.96	-10501.65	3400.82	1751661.50	14521086.90	39°59'1.7270"N	80°36'10.3091"W	11038.58	162.056	0.29
18225.00	89.300	155.930	6546.36	11043.93	-10588.39	3439.56	1751700.22	14521000.20	39°59'0.8682"N	80°36'9.8163"W	11133.04	162.004	0.09
18320.00	89.180	155.910	6547.62	11138.90	-10675.11	3478.32	1751738.97	14520913.51	39°59'0.0094"N	80°36'9.3234"W	11227.50	161.953	0.13
18416.00	89.360	156.590	6548.84	11234.86	-10762.97	3516.98	1751777.61	14520825.68	39°58'59.1394"N	80°36'8.8318"W	11323.02	161.904	0.73
18511.00	89.910	156.290	6549.45	11329.82	-10850.05	3554.95	1751815.57	14520738.63	39°58'58.2772"N	80°36'8.3490"W	11417.59	161.859	0.66
18607.00	89.420	156.100	6550.01	11425.78	-10937.88	3593.70	1751854.30	14520650.84	39°58'57.4076"N	80°36'7.8563"W	11513.12	161.812	0.55
18703.00	89.420	156.160	6550.98	11521.75	-11025.67	3632.54	1751893.13	14520563.09	39°58'56.5383"N	80°36'7.3623"W	11608.65	161.765	0.06
18798.00	89.700	156.030	6551.71	11616.72	-11112.52	3671.04	1751931.61	14520476.27	39°58'55.6784"N	80°36'6.8727"W	11703.18	161.719	0.32
18894.00	89.610	155.790	6552.29	11712.70	-11200.15	3710.22	1751970.78	14520388.67	39°58'54.8106"N	80°36'6.3744"W	11798.69	161.672	0.27
18990.00	89.670	156.130	6552.89	11808.68	-11287.82	3749.33	1752009.87	14520301.03	39°58'53.9425"N	80°36'5.8771"W	11894.22	161.626	0.36
19086.00	89.540	155.900	6553.55	11904.65	-11375.53	3788.35	1752048.88	14520213.36	39°58'53.0740"N	80°36'5.3808"W	11989.76	161.581	0.28
19182.00	89.540	155.880	6554.33	12000.63	-11463.16	3827.57	1752088.08	14520125.77	39°58'52.2064"N	80°36'4.8821"W	12085.29	161.536	0.02
19278.00	89.210	155.820	6555.37	12096.61	-11550.75	3866.84	1752127.34	14520038.21	39°58'51.3390"N	80°36'4.3826"W	12180.81	161.491	0.35
19373.00	89.330	155.960	6556.58	12191.58	-11637.45	3905.64	1752166.12	14519951.54	39°58'50.4805"N	80°36'3.8891"W	12275.36	161.448	0.19
19469.00	89.270	156.020	6557.76	12287.55	-11725.14	3944.70	1752205.17	14519863.89	39°58'49.6122"N	80°36'3.3924"W	12370.92	161.405	0.09
19564.00	89.110	155.790	6559.10	12382.52	-11811.85	3983.48	1752243.93	14519777.21	39°58'48.7535"N	80°36'2.8993"W	12465.47	161.364	0.29



# Actual Wellpath Report

Michael Southworth MSH 206H awp Proj: 20812'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXPAND ENERGY	Well	Michael Southworth MSH 206H
Field	Marshall WV	API	47-051-02521-00-00
Facility	Michael Southworth MSH Pad	Wellbore	Michael Southworth MSH 206H AWB
Slot	206H		

WELLPATH DATA (224 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]
19660.00	89.140	155.780	6560.56	12478.49	-11899.40	4022.85	1752283.29	14519689.70	39°58'47.8867"N	80°36'2.3986"W	12561.01	161.321	0.03
19756.00	89.240	155.670	6561.92	12574.47	-11986.90	4062.32	1752322.74	14519602.23	39°58'47.0202"N	80°36'1.8967"W	12656.55	161.279	0.15
19852.00	89.330	156.010	6563.12	12670.45	-12074.48	4101.60	1752362.01	14519514.68	39°58'46.1529"N	80°36'1.3970"W	12752.11	161.238	0.37
19947.00	89.110	155.730	6564.41	12765.42	-12161.17	4140.44	1752400.83	14519428.02	39°58'45.2945"N	80°36'0.9032"W	12846.69	161.198	0.37
20042.00	89.480	156.610	6565.58	12860.38	-12248.07	4178.82	1752439.19	14519341.16	39°58'44.4341"N	80°36'0.4152"W	12941.32	161.161	1.00
20138.00	89.670	156.090	6566.29	12956.34	-12336.00	4217.33	1752477.69	14519253.26	39°58'43.5634"N	80°35'59.9256"W	13036.98	161.126	0.58
20234.00	89.300	156.100	6567.16	13052.31	-12423.76	4256.23	1752516.57	14519165.53	39°58'42.6944"N	80°35'59.4309"W	13132.61	161.089	0.39
20329.00	89.880	155.910	6567.84	13147.28	-12510.55	4294.86	1752555.19	14519078.78	39°58'41.8351"N	80°35'58.9397"W	13227.23	161.053	0.64
20425.00	89.730	155.850	6568.16	13243.27	-12598.17	4334.09	1752594.40	14518991.20	39°58'40.9674"N	80°35'58.4408"W	13322.84	161.015	0.17
20520.00	89.820	156.210	6568.54	13338.24	-12684.98	4372.68	1752632.98	14518904.42	39°58'40.1079"N	80°35'57.9501"W	13417.49	160.980	0.39
20616.00	89.760	155.990	6568.89	13434.21	-12772.74	4411.57	1752671.86	14518816.69	39°58'39.2388"N	80°35'57.4556"W	13513.14	160.946	0.24
20712.00	89.790	156.190	6569.27	13530.19	-12860.50	4450.48	1752710.75	14518728.96	39°58'38.3698"N	80°35'56.9608"W	13608.80	160.911	0.21
20787.00	89.700	155.770	6569.60	13605.17	-12929.01	4481.01	1752741.27	14518660.49	39°58'37.6915"N	80°35'56.5726"W	13683.52	160.884	0.57
20812.00‡	89.700	155.770	6569.73	13630.16	-12951.81	4491.27	1752751.53	14518637.70	39°58'37.4657"N	80°35'56.4422"W	13708.42	160.875	0.00

HOLE & CASING SECTIONS									
- Ref Wellbore: Michael Southworth MSH 206H AWB      Ref Wellpath: Michael Southworth MSH 206H awp Proj: 20812'									
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	820.00	794.00	26.00	819.99	0.00	0.00	-1.32	-2.05
9.625in Casing	26.00	2054.00	2028.00	26.00	2042.35	0.00	0.00	15.90	-128.14
5.5in Casing	26.00	20812.00	20786.00	26.00	6569.73	0.00	0.00	-12951.81	4491.27



# Actual Wellpath Report

Michael Southworth MSH 206H awp Proj: 20812'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXPAND ENERGY	Well	Michael Southworth MSH 206H
Field	Marshall WV	API	47-051-02521-00-00
Facility	Michael Southworth MSH Pad	Wellbore	Michael Southworth MSH 206H AWB
Slot	206H		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Michael Southworth MSH 206H TL1 -137vs	6397.80	-506.29	-1395.28	1746867.26	14531078.38	40°00'40.7101"N	80°37'11.3745"W	point
Michael Southworth MSH 206H LP rev4	6398.00	-506.62	-1395.12	1746867.42	14531078.05	40°00'40.7069"N	80°37'11.3724"W	point
Michael Southworth MSH 206H wp1	6398.00	-1475.35	-924.62	1747337.74	14530109.69	40°00'31.1137"N	80°37'5.3791"W	point
Michael Southworth MSH 206H wp2	6408.00	-2220.59	-569.19	1747693.03	14529364.74	40°00'23.7340"N	80°37'0.8526"W	point
Michael Southworth MSH 206H wp3	6422.00	-3418.69	3.28	1748265.27	14528167.11	40°00'11.8698"N	80°36'53.5624"W	point
Michael Southworth MSH 206H wp4	6434.00	-4530.12	531.96	1748793.75	14527056.11	40°00'0.8638"N	80°36'46.8308"W	point
Michael Southworth MSH 206H wp5	6438.00	-4835.58	684.54	1748946.27	14526750.77	39°59'57.8386"N	80°36'44.8873"W	point
Michael Southworth MSH 206H TL1 4538vs	6438.60	-4707.74	620.38	1748882.14	14526878.56	39°59'59.1047"N	80°36'45.7045"W	point



# Actual Wellpath Report

Michael Southworth MSH 206H awp Proj: 20812'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXPAND ENERGY	Well	Michael Southworth MSH 206H
Field	Marshall WV	API	47-051-02521-00-00
Facility	Michael Southworth MSH Pad	Wellbore	Michael Southworth MSH 206H AWB
Slot	206H		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Michael Southworth MSH 206H wp6	6445.00	-5472.17	1003.82	1749265.43	14526114.43	39°59'51.5340"N	80°36'40.8204"W	point
Michael Southworth MSH 206H wp7	6465.00	-6815.42	1677.00	1749938.35	14524771.70	39°59'38.2305"N	80°36'32.2464"W	point
Michael Southworth MSH 206H TL2 7592 vs	6475.76	-7444.10	1989.50	1750250.73	14524143.26	39°59'32.0042"N	80°36'28.2667"W	point
Michael Southworth MSH 206H wp8	6479.00	-7809.81	2171.24	1750432.40	14523777.70	39°59'28.3823"N	80°36'25.9524"W	point
Michael Southworth MSH 206H wp9	6506.00	-10150.72	3217.43	1751478.18	14521437.70	39°59'5.2031"N	80°36'12.6449"W	point
Michael Southworth MSH 206H TL3 13631 vs	6561.34	-12959.78	4475.65	1752735.91	14518629.73	39°58'37.3877"N	80°35'56.6433"W	point
Michael Southworth MSH 206H BHL rev4	6566.00	-12959.78	4475.65	1752735.91	14518629.73	39°58'37.3877"N	80°35'56.6433"W	point



# Actual Wellpath Report

Michael Southworth MSH 206H awp Proj: 20812'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXPAND ENERGY	Well	Michael Southworth MSH 206H
Field	Marshall WV	API	47-051-02521-00-00
Facility	Michael Southworth MSH Pad	Wellbore	Michael Southworth MSH 206H AWB
Slot	206H		

## WELLPATH COMPOSITION - Ref Wellbore: Michael Southworth MSH 206H AWB Ref Wellpath: Michael Southworth MSH 206H awp Proj: 20812'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	651.00	BH Generic gyro - northseeking (Standard)	1 Imported Gyro IFR-MSA 17.5" 100' - 651'	Michael Southworth MSH 206H AWB	3/11/2025
651.00	765.00	Custom OWSG MWD+IFR1+SAG+FDIR (Approximation)	2 Total MWD IFR-MSA 17.5" 686' - 765'	Michael Southworth MSH 206H AWB	3/11/2025
765.00	1982.00	Custom OWSG MWD+IFR1+SAG+FDIR (Approximation)	3 Total MWD IFR-MSA 12.25" 866' - 1982'	Michael Southworth MSH 206H AWB	3/11/2025
1982.00	5705.00	Custom OWSG MWD+IFR1+SAG+FDIR (Approximation)	4 Total MWD IFR-MSA 8.75" 2155' - 5705'	Michael Southworth MSH 206H AWB	3/11/2025
5705.00	20812.00	Custom OWSG MWD+IFR1+SAG+FDIR (Approximation)	5 BH MWD ATC IFR-MSA 8.5" 5807' - 20787'	Michael Southworth MSH 206H AWB	3/11/2025