

# SOUTHWESTERN ENERGY

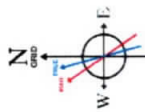
Location: Ohio County, WV  
 Slot: Slot 206H  
 Field: Ohio  
 Well: Timmy Minch OHI 206H  
 Facility: Timmy Minch OHI Pad Wellbore: Timmy Minch OHI 206H PWB

Plot reference wellpath is Timmy Minch OHI 206H PWP Rev-B.0  
 Grid System: NAD83 / UTM Zone 17 North, US feet  
 North Reference: Grid north  
 True vertical depths are referenced to SDC 42 (KB)  
 Measured depths are referenced to SDC 42 (KB)  
 SDC 42 (KB) to Mean Sea Level: 1233.9 feet  
 Mean Sea Level to Ground level (At Slot Slot 206H): -1207.9 feet  
 Coordinates are in feet referenced to Slot

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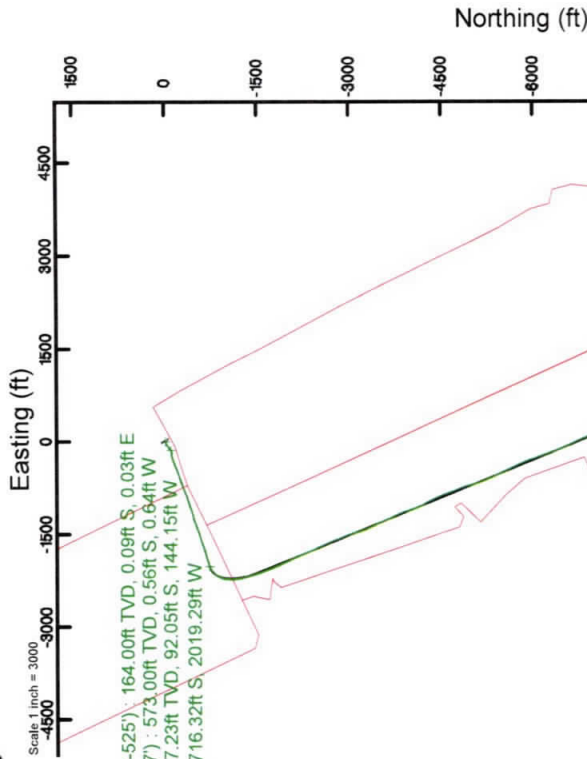
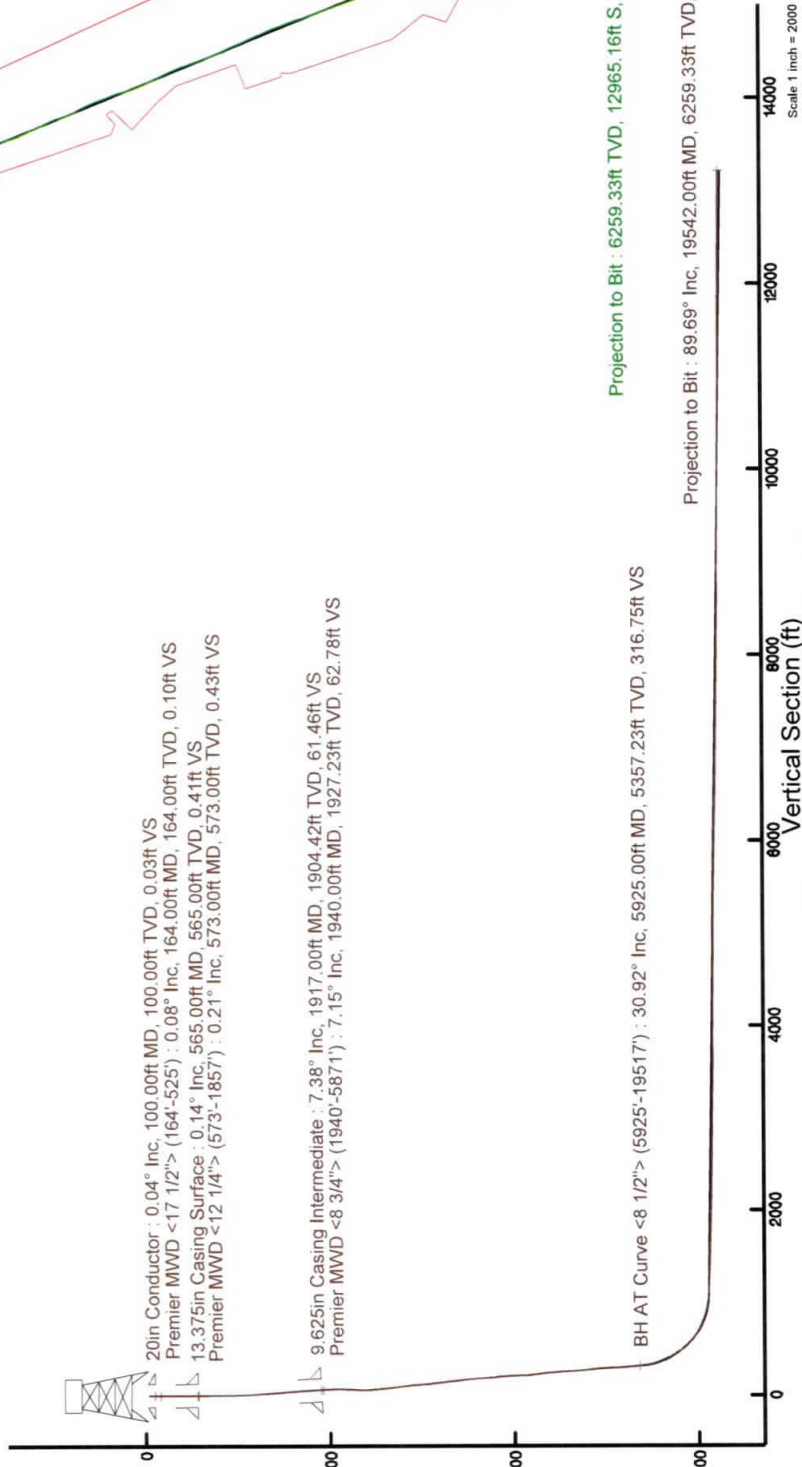
User specified Dip: 67.39°  
 Magnetic North is 7.99 degrees West of True North (at 16/Sept/2018)  
 Grid North is 0.25 degrees East of True North  
 To correct azimuth from Magnetic to Grid subtract 8.22 degrees

20in Conductor : 0.04° Inc, 100.00ft MD, 100.00ft TVD, 0.03ft VS  
 Premier MWD <17 1/2"> : 0.08° Inc, 164.00ft MD, 164.00ft TVD, 0.10ft VS  
 13.375in Casing Surface : 0.14° Inc, 565.00ft MD, 565.00ft TVD, 0.41ft VS  
 Premier MWD <12 1/4"> : 0.21° Inc, 573.00ft MD, 573.00ft TVD, 0.43ft VS  
 9.625in Casing Intermediate : 7.38° Inc, 1917.00ft MD, 1904.42ft TVD, 61.46ft VS  
 Premier MWD <8 3/4"> : 7.15° Inc, 1940.00ft MD, 1927.23ft TVD, 62.78ft VS

BH AT Curve <8 1/2"> : 5925.00ft MD, 5357.23ft TVD, 316.75ft VS

Scale 1 inch = 2000

True Vertical Depth (ft)



Premier MWD <17 1/2"> : 164.00ft TVD, 0.08ft S, 0.03ft E  
 Premier MWD <12 1/4"> : 573.00ft TVD, 0.56ft S, 0.64ft W  
 Premier MWD <8 3/4"> : 1927.23ft TVD, 92.05ft S, 144.15ft W  
 BH AT Curve <8 1/2"> : 5357.23ft TVD, 716.32ft S, 2019.29ft W

## Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Timmy Minch OHI Pad	17393307.99	14558022.602	40°05'07.388"N	80°38'46.893"W
Slot	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot 206H	-36.35	1739351.649	14557986.270	80°38'46.928"W
SDC 42 (KB) to Ground level (At Slot Slot 206H)	20.90			
Mean Sea Level to Ground level (At Slot Slot 206H)				26ft
SDC 42 (KB) to Mean Sea Level				-1207.9ft

## Comments

API 47-069-00277-0000  
 BH Job #: 109387170  
 Rig SDC 42  
 Duration: 09/16/2018 - 09/21/2018



### REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Timmy Minch OHI 206H
Field	Ohio	Wellbore	Timmy Minch OHI 206H AWB
Facility	Timmy Minch OHI Pad		

### REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Atenjen
Scale	0.999611	Report Generated	04/Oct/2018 at 13:47
Convergence at slot	0.23° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Timmy_Minch_OHI_206H_AWP_Proj_19542_MD.xml

### WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-36.35	20.90	1739351.65	14557986.27	40°05'07.028"N	80°38'46.626"W
Facility Reference Pt			1739330.76	14558022.60	40°05'07.388"N	80°38'46.893"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.478"W

### WELLPATH DATUM

Calculation method	Minimum curvature	SDC 42 (KB) to Facility Vertical Datum	1233.90ft
Horizontal Reference Pt	Slot	SDC 42 (KB) to Mean Sea Level	1233.90ft
Vertical Reference Pt	SDC 42 (KB)	SDC 42 (KB) to Ground Level at Slot (Slot 206H)	26.00ft
MD Reference Pt	SDC 42 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	168.97°

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# Actual Wellpath Report

Timmy Minch OHI 206H AWP Proj: 19542' MD  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Timmy Minch OHI 206H
Field	Ohio	Wellbore	Timmy Minch OHI 206H AWB
Facility	Timmy Minch OHI Pad		

## WELLPATH DATA (226 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
0.00†	0.000	161.800	0.00	0.00	0.00	0.00	1739351.65	14557986.27	40°05'07.028"N	80°38'46.626"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	161.800	26.00	0.00	0.00	0.00	1739351.65	14557986.27	40°05'07.028"N	80°38'46.626"W	0.00	0.000	0.00	0.00	0.00
164.00	0.080	161.800	164.00	0.10	-0.09	0.03	1739351.68	14557986.18	40°05'07.027"N	80°38'46.626"W	0.10	161.800	0.06	0.06	117.25
225.00	0.310	188.940	225.00	0.29	-0.29	0.02	1739351.67	14557985.97	40°05'07.025"N	80°38'46.626"W	0.30	176.557	0.40	0.38	44.49
316.00	0.080	255.010	316.00	0.53	-0.55	-0.08	1739351.57	14557985.72	40°05'07.023"N	80°38'46.627"W	0.56	188.398	0.32	-0.25	72.60
407.00	0.180	270.730	407.00	0.50	-0.57	-0.29	1739351.36	14557985.70	40°05'07.022"N	80°38'46.630"W	0.64	206.691	0.12	0.11	17.27
497.00	0.100	303.260	497.00	0.42	-0.52	-0.49	1739351.16	14557985.75	40°05'07.023"N	80°38'46.632"W	0.72	223.247	0.12	-0.09	36.14
525.00	0.300	270.490	525.00	0.39	-0.51	-0.59	1739351.06	14557985.76	40°05'07.023"N	80°38'46.634"W	0.78	228.994	0.79	0.71	-117.04
573.00	0.210	124.420	573.00	0.43	-0.56	-0.64	1739351.01	14557985.71	40°05'07.023"N	80°38'46.634"W	0.85	228.868	1.02	-0.19	-304.31
603.00	0.080	99.680	603.00	0.47	-0.59	-0.57	1739351.07	14557985.68	40°05'07.022"N	80°38'46.633"W	0.83	224.042	0.47	-0.43	-82.47
695.00	1.280	250.610	694.99	0.64	-0.95	-1.48	1739350.17	14557985.32	40°05'07.019"N	80°38'46.645"W	1.76	237.428	1.47	1.30	164.05
785.00	2.740	250.260	784.93	1.12	-2.01	-4.45	1739347.20	14557984.26	40°05'07.008"N	80°38'46.683"W	4.88	245.751	1.62	1.62	-0.39
875.00	4.760	247.710	874.74	2.17	-4.15	-9.93	1739341.72	14557982.12	40°05'06.987"N	80°38'46.754"W	10.77	247.331	2.25	2.24	-2.83
966.00	7.190	251.630	965.23	3.64	-7.38	-18.83	1739332.82	14557978.90	40°05'06.956"N	80°38'46.869"W	20.23	248.611	2.71	2.67	4.31
1056.00	9.090	246.910	1054.33	5.84	-11.94	-30.72	1739320.94	14557974.33	40°05'06.911"N	80°38'47.022"W	32.96	248.760	2.24	2.11	-5.24
1146.00	9.940	238.350	1143.09	10.06	-18.80	-43.87	1739307.79	14557967.47	40°05'06.844"N	80°38'47.191"W	47.73	246.799	1.83	0.94	-9.51
1237.00	9.850	237.870	1232.74	15.63	-27.07	-57.15	1739294.52	14557959.21	40°05'06.763"N	80°38'47.363"W	63.24	244.658	0.13	-0.10	-0.53
1327.00	9.720	233.250	1321.43	21.70	-35.71	-69.76	1739281.92	14557950.58	40°05'06.678"N	80°38'47.525"W	78.36	242.894	0.88	-0.14	-5.13
1417.00	9.570	233.000	1410.16	28.27	-44.75	-81.82	1739269.86	14557941.53	40°05'06.589"N	80°38'47.681"W	93.26	241.322	0.17	-0.17	-0.28
1508.00	9.220	232.650	1499.94	34.82	-53.73	-93.66	1739258.03	14557932.56	40°05'06.501"N	80°38'47.834"W	107.97	240.158	0.39	-0.38	-0.38
1598.00	8.930	228.510	1588.81	41.56	-62.73	-104.62	1739247.07	14557923.56	40°05'06.412"N	80°38'47.975"W	121.99	239.053	0.79	-0.32	-4.60
1689.00	8.730	232.240	1678.73	48.24	-71.64	-115.37	1739236.32	14557914.66	40°05'06.325"N	80°38'48.114"W	135.80	238.162	0.67	-0.22	4.10
1769.00	8.350	238.170	1757.85	53.04	-78.42	-125.11	1739226.59	14557907.88	40°05'06.258"N	80°38'48.240"W	147.65	237.919	1.20	-0.48	7.41
1857.00	7.990	233.440	1844.95	57.94	-85.43	-135.45	1739216.25	14557900.87	40°05'06.189"N	80°38'48.373"W	160.14	237.758	0.87	-0.41	-5.38
1940.00	7.150	231.930	1927.23	62.78	-92.05	-144.15	1739207.56	14557894.25	40°05'06.124"N	80°38'48.485"W	171.03	237.437	1.04	-1.01	-1.82
1986.00	6.860	231.800	1972.89	65.33	-95.52	-148.56	1739203.15	14557890.79	40°05'06.090"N	80°38'48.542"W	176.62	237.260	0.63	-0.63	-0.28
2076.00	10.260	260.190	2061.91	67.62	-100.21	-160.69	1739191.02	14557886.10	40°05'06.044"N	80°38'48.698"W	189.38	238.051	5.92	3.78	31.54
2165.00	13.280	260.240	2149.03	67.22	-103.30	-178.58	1739173.14	14557883.01	40°05'06.014"N	80°38'48.929"W	206.30	239.954	3.39	3.39	0.06
2256.00	17.810	270.230	2236.69	64.27	-105.01	-202.81	1739148.91	14557881.30	40°05'05.998"N	80°38'49.241"W	228.39	242.626	5.77	4.98	10.98
2346.00	20.040	265.760	2321.83	59.76	-106.10	-231.96	1739119.78	14557880.21	40°05'05.989"N	80°38'49.616"W	255.07	245.421	2.95	2.48	-4.97





# Actual Wellpath Report

Timmy Minch OHI 206H AWP Proj: 19542'MD  
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot 206H
Operator	SOUTHWESTERN ENERGY	Well	Timmy Minch OHI 206H
Area	Ohio County, WV	Wellbore	Timmy Minch OHI 206H AWB
Field	Ohio		
Facility	Timmy Minch OHI Pad		

WELLPATH DATA (226 stations)															
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
2436.00	23.780	252.510	2405.36	59.98	-112.70	-264.68	1739087.08	14557873.62	40°05'05.925"N	80°38'50.037"W	287.67	246.936	6.86	4.16	-14.72
2527.00	28.120	249.970	2487.17	65.40	-125.56	-302.34	1739049.42	14557860.75	40°05'05.799"N	80°38'50.522"W	327.38	247.447	4.92	4.77	-2.79
2617.00	30.700	249.570	2565.57	72.47	-140.85	-343.81	1739007.98	14557845.47	40°05'05.650"N	80°38'51.056"W	371.54	247.722	2.87	2.87	-0.44
2707.00	32.570	249.910	2642.19	80.04	-157.19	-388.09	1738963.71	14557829.14	40°05'05.490"N	80°38'51.627"W	418.72	247.950	2.09	2.08	0.38
2798.00	32.560	247.670	2718.88	88.69	-174.91	-433.75	1738918.07	14557811.43	40°05'05.317"N	80°38'52.215"W	467.68	248.038	1.32	-0.01	-2.46
2888.00	32.480	245.360	2794.78	99.13	-194.19	-478.11	1738873.72	14557792.16	40°05'05.128"N	80°38'52.787"W	516.04	247.895	1.38	-0.09	-2.57
2978.00	30.510	247.870	2871.52	109.21	-212.87	-521.25	1738830.60	14557773.48	40°05'04.945"N	80°38'53.343"W	563.04	247.786	2.63	-2.19	2.79
3068.00	30.120	253.410	2949.23	115.80	-227.93	-564.06	1738787.81	14557758.43	40°05'04.798"N	80°38'53.895"W	608.37	247.997	3.14	-0.43	6.16
3158.00	31.020	250.460	3026.72	121.42	-242.13	-607.56	1738744.32	14557744.23	40°05'04.659"N	80°38'54.455"W	654.03	248.271	1.94	1.00	-3.28
3249.00	32.310	249.350	3104.17	128.95	-258.55	-652.42	1738699.49	14557727.82	40°05'04.498"N	80°38'55.033"W	701.78	248.382	1.56	1.42	-1.22
3339.00	32.870	248.890	3180.00	137.25	-275.83	-697.71	1738654.21	14557710.55	40°05'04.330"N	80°38'55.616"W	750.25	248.429	0.68	0.62	-0.51
3429.00	32.790	249.060	3255.63	145.72	-293.34	-743.25	1738608.68	14557693.05	40°05'04.158"N	80°38'56.203"W	799.05	248.463	0.14	-0.09	0.19
3520.00	32.600	250.040	3332.21	153.76	-310.51	-789.31	1738562.65	14557675.88	40°05'03.990"N	80°38'56.797"W	848.19	248.525	0.62	-0.21	1.08
3610.00	32.150	247.680	3408.22	162.22	-327.88	-834.25	1738517.72	14557658.51	40°05'03.820"N	80°38'57.376"W	896.37	248.544	1.49	-0.50	-2.62
3701.00	31.800	247.260	3485.42	171.82	-346.35	-878.76	1738473.23	14557640.06	40°05'03.640"N	80°38'57.949"W	944.55	248.489	0.46	-0.38	-0.46
3791.00	32.040	253.250	3561.83	179.02	-362.40	-923.51	1738428.50	14557624.01	40°05'03.483"N	80°38'58.526"W	992.07	248.574	3.53	0.27	6.66
3882.00	31.080	252.730	3639.37	183.97	-376.33	-969.05	1738382.98	14557610.09	40°05'03.347"N	80°38'59.112"W	1039.56	248.776	1.10	-1.05	-0.57
3972.00	32.400	251.560	3715.90	189.61	-390.85	-1014.11	1738337.93	14557595.57	40°05'03.205"N	80°38'59.693"W	1086.82	248.923	1.62	1.47	-1.30
4062.00	32.070	249.300	3792.04	196.73	-406.93	-1059.34	1738292.73	14557579.50	40°05'03.048"N	80°39'00.276"W	1134.80	248.987	1.39	-0.37	-2.51
4153.00	30.970	250.340	3869.61	204.30	-423.34	-1103.99	1738248.03	14557563.09	40°05'02.888"N	80°39'00.851"W	1182.37	249.020	1.35	-1.21	1.14
4244.00	31.720	254.280	3947.34	209.77	-437.70	-1149.07	1738203.09	14557548.74	40°05'02.747"N	80°39'01.432"W	1229.61	249.147	2.40	0.82	4.33
4334.00	32.870	256.130	4023.41	212.92	-449.97	-1195.56	1738156.56	14557536.48	40°05'02.628"N	80°39'02.030"W	1277.43	249.375	1.68	1.28	2.06
4424.00	35.130	256.360	4098.02	215.31	-461.93	-1244.44	1738107.70	14557524.52	40°05'02.512"N	80°39'02.660"W	1327.41	249.635	2.52	2.51	0.26
4515.00	35.430	251.060	4172.33	220.13	-476.67	-1294.84	1738057.31	14557509.79	40°05'02.368"N	80°39'03.309"W	1379.79	249.790	3.38	0.33	-5.82
4605.00	34.300	247.760	4246.18	228.65	-494.74	-1342.99	1738009.18	14557491.72	40°05'02.191"N	80°39'03.929"W	1431.22	249.777	2.44	-1.26	-3.67
4696.00	31.910	249.050	4322.40	237.78	-513.04	-1389.20	1737963.00	14557473.43	40°05'02.012"N	80°39'04.525"W	1480.91	249.730	2.74	-2.63	1.42
4786.00	30.330	250.230	4399.45	245.33	-529.24	-1432.80	1737919.41	14557457.24	40°05'01.854"N	80°39'05.086"W	1527.42	249.727	1.88	-1.76	1.31
4876.00	30.790	249.900	4476.95	252.42	-544.84	-1475.81	1737876.41	14557441.64	40°05'01.701"N	80°39'05.641"W	1573.18	249.737	0.54	0.51	-0.37
4967.00	31.310	252.420	4554.91	258.79	-559.99	-1520.23	1737832.01	14557426.50	40°05'01.553"N	80°39'06.213"W	1620.09	249.778	1.54	0.57	2.77
5057.00	33.410	255.700	4630.93	262.87	-573.17	-1566.54	1737785.72	14557413.32	40°05'01.425"N	80°39'06.809"W	1668.11	249.903	3.04	2.33	3.64



### REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Timmy Minch OHI 206H
Field	Ohio	Wellbore	Timmy Minch OHI 206H AWB
Facility	Timmy Minch OHI Pad		

### WELLPATH DATA (226 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]	[°]	[°]	[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
5148.00	34.370	252.530	4706.48	267.18	-587.07	-1615.33	1737736.95	14557399.43	40°05'01.289"N	80°39'07.438"W	1718.70	250.027	2.21	1.05	-3.48
5238.00	33.740	248.690	4781.05	274.49	-603.78	-1662.85	1737689.45	14557382.72	40°05'01.126"N	80°39'08.050"W	1769.07	250.044	2.49	-0.70	-4.27
5328.00	32.950	249.430	4856.24	283.01	-621.47	-1709.05	1737643.27	14557365.04	40°05'00.953"N	80°39'08.645"W	1818.54	250.017	0.99	-0.88	0.82
5419.00	32.570	252.200	4932.77	290.00	-637.65	-1755.55	1737596.79	14557348.87	40°05'00.795"N	80°39'09.244"W	1867.76	250.038	1.70	-0.42	3.04
5509.00	32.890	255.400	5008.48	294.37	-651.22	-1802.26	1737550.09	14557335.31	40°05'00.663"N	80°39'09.846"W	1916.31	250.133	1.95	0.36	3.56
5600.00	33.320	255.410	5084.71	297.46	-663.74	-1850.36	1737502.01	14557322.79	40°05'00.541"N	80°39'10.465"W	1965.80	250.267	0.47	0.47	0.01
5690.00	34.310	253.720	5159.49	301.32	-677.08	-1898.63	1737453.76	14557309.45	40°05'00.411"N	80°39'11.087"W	2015.75	250.373	1.52	1.10	-1.88
5781.00	33.250	252.340	5235.12	306.55	-691.84	-1947.02	1737405.39	14557294.75	40°05'00.267"N	80°39'11.710"W	2066.29	250.438	1.44	-1.16	-1.52
5871.00	31.630	251.030	5311.08	312.66	-707.00	-1992.86	1737359.57	14557279.55	40°05'00.119"N	80°39'12.301"W	2114.55	250.467	1.96	-1.80	-1.46
5925.00	30.920	250.100	5357.23	316.75	-716.32	-2019.29	1737333.15	14557270.23	40°05'00.028"N	80°39'12.641"W	2142.58	250.468	1.59	-1.31	-1.72
6007.00	31.100	242.790	5427.54	325.91	-733.18	-2057.95	1737294.50	14557253.37	40°04'59.863"N	80°39'13.139"W	2184.65	250.391	4.60	0.22	-8.91
6097.00	32.170	232.280	5504.22	343.16	-758.49	-2097.61	1737254.86	14557228.08	40°04'59.614"N	80°39'13.651"W	2230.53	250.120	6.23	1.19	-11.68
6187.00	33.490	223.670	5579.89	368.28	-791.13	-2133.73	1737218.76	14557195.45	40°04'59.293"N	80°39'14.117"W	2275.67	249.657	5.39	1.47	-9.57
6278.00	33.920	215.070	5655.63	400.42	-830.09	-2165.67	1737186.83	14557156.50	40°04'58.909"N	80°39'14.530"W	2319.30	249.028	5.26	0.47	-9.45
6368.00	35.070	205.680	5729.86	438.59	-873.98	-2191.32	1737161.18	14557112.63	40°04'58.476"N	80°39'14.862"W	2359.18	248.256	6.04	1.28	-10.43
6458.00	37.860	196.750	5802.29	483.79	-923.77	-2210.50	1737142.01	14557062.86	40°04'57.985"N	80°39'15.112"W	2395.76	247.320	6.66	3.10	-9.92
6549.00	43.410	187.270	5871.38	538.28	-981.63	-2222.53	1737129.99	14557005.02	40°04'57.414"N	80°39'15.269"W	2429.66	246.170	9.11	6.10	-10.42
6639.00	51.880	181.330	5931.99	602.37	-1047.85	-2227.27	1737125.24	14556938.83	40°04'56.760"N	80°39'15.334"W	2461.45	244.805	10.59	9.41	-6.60
6729.00	60.180	176.250	5982.26	675.84	-1122.37	-2225.54	1737126.98	14556864.34	40°04'56.023"N	80°39'15.315"W	2492.54	243.238	10.34	9.22	-5.64
6820.00	66.870	171.400	6022.82	756.93	-1203.26	-2216.69	1737135.83	14556783.48	40°04'55.223"N	80°39'15.205"W	2522.21	241.506	8.76	7.35	-5.33
6865.00	67.050	167.900	6044.42	798.33	-1243.99	-2209.27	1737143.24	14556742.76	40°04'54.821"N	80°39'15.112"W	2535.43	240.617	7.03	0.40	-7.62
6910.00	70.330	165.280	6056.79	840.21	-1284.77	-2199.57	1737152.94	14556702.00	40°04'54.417"N	80°39'14.989"W	2547.30	239.711	9.17	7.29	-5.98
6956.00	73.080	163.690	6071.23	883.74	-1326.84	-2187.88	1737164.62	14556659.94	40°04'54.001"N	80°39'14.841"W	2558.78	238.765	6.82	5.98	-3.46
7001.00	75.760	163.030	6083.32	926.88	-1368.37	-2175.47	1737177.03	14556618.43	40°04'53.590"N	80°39'14.683"W	2570.04	237.830	6.12	5.96	-1.47
7046.00	78.980	163.420	6093.16	970.56	-1410.41	-2162.80	1737189.70	14556576.41	40°04'53.174"N	80°39'14.522"W	2582.04	236.891	7.21	7.16	0.87
7091.00	82.410	163.220	6100.43	1014.75	-1452.94	-2150.05	1737202.44	14556533.90	40°04'52.753"N	80°39'14.360"W	2594.95	235.950	7.63	7.62	-0.44
7137.00	85.350	162.480	6105.34	1060.22	-1496.64	-2136.57	1737215.92	14556490.21	40°04'52.321"N	80°39'14.189"W	2608.61	234.989	6.59	6.39	-1.61
7182.00	87.850	160.610	6108.00	1104.76	-1539.24	-2122.35	1737230.13	14556447.63	40°04'51.899"N	80°39'14.008"W	2621.76	234.048	6.93	5.56	-4.16
7272.00	87.320	159.250	6111.80	1193.56	-1623.70	-2091.49	1737260.98	14556363.20	40°04'51.064"N	80°39'13.615"W	2647.78	232.176	1.62	-0.59	-1.51
7362.00	87.660	158.290	6115.74	1282.05	-1707.51	-2058.93	1737293.52	14556279.42	40°04'50.234"N	80°39'13.201"W	2674.84	230.330	1.13	0.38	-1.07



## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Timmy Minch OHI 206H
Field	Ohio	Wellbore	Timmy Minch OHI 206H AWB
Facility	Timmy Minch OHI Pad		

## WELLPATH DATA (226 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
[°]	[°]	[ft]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]	[°]	[°]	[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
7453.00	87.690	156.450	6119.43	1371.11	-1791.43	-2023.95	1737328.49	14556195.54	40°04'49.404"N	80°39'12.755"W	2702.89	228.487	2.02	0.03	-2.02
7544.00	88.580	155.410	6122.39	1459.72	-1874.48	-1986.85	1737365.57	14556112.53	40°04'48.582"N	80°39'12.282"W	2731.53	226.667	1.50	0.98	-1.14
7634.00	88.430	154.970	6124.74	1547.10	-1956.14	-1949.10	1737403.31	14556030.89	40°04'47.773"N	80°39'11.800"W	2761.43	224.897	0.52	-0.17	-0.49
7725.00	88.340	155.170	6127.31	1635.40	-2038.63	-1910.76	1737441.64	14555948.44	40°04'46.956"N	80°39'11.311"W	2794.10	223.146	0.24	-0.10	0.22
7815.00	88.400	155.330	6129.87	1722.79	-2120.33	-1873.09	1737479.29	14555866.77	40°04'46.148"N	80°39'10.831"W	2829.18	221.457	0.19	0.07	0.18
7905.00	88.430	156.410	6132.35	1810.42	-2202.43	-1836.32	1737516.05	14555784.70	40°04'45.335"N	80°39'10.362"W	2867.54	219.820	1.20	0.03	1.20
7996.00	88.340	158.970	6134.92	1899.62	-2286.58	-1801.79	1737550.57	14555700.58	40°04'44.502"N	80°39'09.922"W	2911.16	218.238	2.81	-0.10	2.81
8086.00	88.460	157.270	6137.43	1987.97	-2370.06	-1768.26	1737584.08	14555617.14	40°04'43.676"N	80°39'09.495"W	2957.01	216.726	1.89	0.13	-1.89
8176.00	88.430	155.640	6139.88	2075.80	-2452.53	-1732.32	1737620.00	14555534.39	40°04'42.859"N	80°39'09.037"W	3002.64	215.235	1.81	-0.03	-1.81
8267.00	88.340	155.450	6142.44	2164.27	-2535.34	-1694.67	1737657.64	14555451.92	40°04'42.040"N	80°39'08.556"W	3049.56	213.759	0.23	-0.10	-0.21
8358.00	88.460	156.540	6144.98	2252.91	-2618.43	-1657.66	1737694.64	14555368.86	40°04'41.217"N	80°39'08.084"W	3099.04	212.337	1.20	0.13	1.20
8448.00	88.800	157.410	6147.13	2340.92	-2701.24	-1622.47	1737729.81	14555286.09	40°04'40.397"N	80°39'07.636"W	3151.05	210.991	1.04	0.38	0.97
8538.00	88.890	157.950	6148.95	2429.16	-2784.48	-1588.30	1737763.97	14555202.88	40°04'39.573"N	80°39'07.200"W	3205.62	209.701	0.61	0.10	0.60
8629.00	89.050	157.570	6150.58	2518.41	-2868.69	-1553.86	1737798.40	14555118.70	40°04'38.740"N	80°39'06.762"W	3262.50	208.443	0.45	0.18	-0.42
8719.00	89.110	159.190	6152.03	2606.87	-2952.35	-1520.70	1737831.54	14555035.07	40°04'37.912"N	80°39'06.339"W	3320.98	207.252	1.80	0.07	1.80
8809.00	89.200	163.200	6153.36	2696.01	-3037.52	-1491.70	1737860.53	14554949.94	40°04'37.069"N	80°39'05.971"W	3384.04	206.155	4.46	0.10	4.46
8899.00	89.600	165.510	6154.30	2785.71	-3124.17	-1467.43	1737884.79	14554863.32	40°04'36.212"N	80°39'05.663"W	3451.64	205.160	2.60	0.44	2.57
8990.00	89.420	160.000	6155.08	2876.13	-3211.05	-1440.47	1737911.74	14554776.48	40°04'35.352"N	80°39'05.320"W	3519.34	204.161	6.06	-0.20	-6.05
9080.00	89.230	156.050	6156.14	2964.47	-3294.49	-1406.80	1737945.40	14554693.07	40°04'34.526"N	80°39'04.891"W	3582.28	203.123	4.39	-0.21	-4.39
9170.00	89.080	154.630	6157.47	3051.93	-3376.27	-1369.25	1737982.93	14554611.32	40°04'33.717"N	80°39'04.412"W	3643.35	202.075	1.59	-0.17	-1.58
9261.00	89.200	156.000	6158.83	3139.96	-3458.26	-1329.82	1738020.35	14554529.36	40°04'32.905"N	80°39'03.909"W	3705.13	201.033	0.70	0.13	-0.69
9352.00	89.080	156.740	6160.20	3228.39	-3540.97	-1291.90	1738060.25	14554446.69	40°04'32.086"N	80°39'03.426"W	3769.28	200.044	3.01	-0.13	3.01
9442.00	89.260	157.920	6161.50	3316.52	-3624.00	-1257.22	1738094.92	14554363.68	40°04'31.264"N	80°39'02.984"W	3835.88	199.132	1.33	0.20	1.31
9533.00	89.170	153.950	6162.75	3405.15	-3707.07	-1220.12	1738132.01	14554280.65	40°04'30.442"N	80°39'02.511"W	3902.70	198.218	4.36	-0.10	-4.36
9623.00	89.230	154.200	6164.00	3492.12	-3788.01	-1180.78	1738171.33	14554199.74	40°04'29.641"N	80°39'02.009"W	3967.77	197.313	0.29	0.07	0.28
9714.00	89.780	161.330	6164.79	3581.33	-3872.18	-1146.36	1738205.73	14554115.60	40°04'28.807"N	80°39'01.570"W	4038.31	196.491	7.86	0.60	7.84
9804.00	90.120	163.060	6164.87	3670.69	-3957.87	-1118.85	1738233.24	14554029.95	40°04'27.960"N	80°39'01.221"W	4112.97	195.785	1.96	0.38	1.92
9894.00	90.520	159.680	6164.37	3759.89	-4043.14	-1090.10	1738261.97	14553944.71	40°04'27.116"N	80°39'00.855"W	4187.51	195.089	3.78	0.44	-3.76
9985.00	90.220	155.830	6163.78	3849.13	-4127.35	-1055.66	1738296.40	14553860.54	40°04'26.282"N	80°39'00.416"W	4260.21	194.347	4.24	-0.33	-4.23
10075.00	89.540	152.490	6163.97	3936.13	-4208.34	-1016.44	1738335.61	14553779.58	40°04'25.480"N	80°38'59.916"W	4329.35	193.579	3.79	-0.76	-3.71



# Actual Wellpath Report

Timmy Minch OHI 206H AWP Proj: 19542'MD

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## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Timmy Minch OHI 206H
Field	Ohio	Wellbore	Timmy Minch OHI 206H AWB
Facility	Timmy Minch OHI Pad		

## WELLPATH DATA (226 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
10166.00	89.480	150.610	6164.75	4022.95	-4288.34	-973.09	1738378.94	14553699.61	40°04'24.688"N	80°38'59.362"W	4397.36	192.785	2.07	-0.07	-2.07
10257.00	89.450	154.450	6165.60	4110.21	-4369.06	-931.12	1738420.89	14553618.92	40°04'23.889"N	80°38'58.827"W	4467.18	192.031	4.22	-0.03	4.22
10347.00	89.480	157.170	6166.44	4197.83	-4451.15	-894.25	1738457.75	14553536.86	40°04'23.076"N	80°38'58.357"W	4540.09	191.360	3.02	0.03	3.02
10437.00	89.480	159.970	6167.25	4286.34	-4534.91	-861.37	1738490.62	14553453.13	40°04'22.247"N	80°38'57.938"W	4615.99	190.755	3.11	0.00	3.11
10527.00	89.570	161.070	6168.00	4375.36	-4619.76	-831.36	1738520.62	14553368.32	40°04'21.408"N	80°38'57.556"W	4693.97	190.202	2.98	0.10	1.22
10618.00	89.480	158.360	6168.76	4465.16	-4705.10	-799.81	1738552.15	14553283.07	40°04'20.563"N	80°38'57.155"W	4772.60	189.647	2.98	-0.10	-2.98
10708.00	89.480	157.030	6169.57	4553.42	-4788.36	-765.66	1738586.29	14553199.78	40°04'19.739"N	80°38'56.720"W	4849.19	189.085	1.48	0.00	-1.48
10798.00	89.290	161.930	6170.54	4642.16	-4872.62	-734.12	1738617.82	14553115.55	40°04'18.905"N	80°38'56.318"W	4927.61	188.568	5.45	-0.21	5.44
10889.00	89.510	165.780	6171.49	4732.77	-4960.01	-708.82	1738643.10	14553028.20	40°04'18.040"N	80°38'55.997"W	5010.40	188.133	4.24	0.24	4.23
10979.00	89.660	163.530	6172.14	4822.51	-5046.80	-685.01	1738666.91	14552941.45	40°04'17.182"N	80°38'55.695"W	5093.07	187.730	2.51	0.17	-2.50
11070.00	90.090	159.760	6172.34	4912.75	-5133.15	-656.36	1738695.55	14552855.13	40°04'16.327"N	80°38'55.331"W	5174.94	187.287	4.17	0.47	-4.14
11160.00	89.350	156.410	6172.78	5001.12	-5216.63	-622.77	1738729.12	14552771.68	40°04'15.501"N	80°38'54.903"W	5253.67	186.808	3.81	-0.82	-3.72
11250.00	89.540	155.110	6173.65	5088.73	-5298.69	-585.82	1738766.05	14552689.65	40°04'14.689"N	80°38'54.432"W	5330.98	186.309	1.46	0.21	-1.44
11340.00	89.480	154.290	6174.42	5175.95	-5380.06	-547.36	1738804.50	14552608.32	40°04'13.883"N	80°38'53.942"W	5407.83	185.809	0.91	-0.07	-0.91
11431.00	89.380	156.770	6175.33	5264.44	-5462.87	-509.67	1738842.17	14552525.53	40°04'13.063"N	80°38'53.461"W	5486.60	185.330	2.73	-0.11	2.73
11521.00	89.350	155.830	6176.33	5352.25	-5545.27	-473.50	1738878.33	14552443.16	40°04'12.248"N	80°38'53.000"W	5565.45	184.881	1.04	-0.03	-1.04
11611.00	88.950	154.060	6177.66	5439.55	-5626.79	-435.39	1738916.43	14552361.67	40°04'11.440"N	80°38'52.514"W	5643.61	184.425	2.02	-0.44	-1.97
11701.00	88.920	155.020	6179.33	5526.69	-5708.04	-396.71	1738955.09	14552280.46	40°04'10.636"N	80°38'52.021"W	5721.81	183.976	1.07	-0.03	1.07
11792.00	88.950	156.760	6181.03	5615.32	-5791.08	-359.55	1738992.24	14552197.45	40°04'09.814"N	80°38'51.547"W	5802.23	183.553	1.91	0.03	1.91
11882.00	88.950	159.440	6182.68	5703.68	-5874.57	-325.99	1739025.79	14552114.00	40°04'08.988"N	80°38'51.119"W	5883.60	183.176	2.98	0.00	2.98
11972.00	88.920	159.740	6184.35	5792.46	-5958.90	-294.60	1739057.16	14552029.70	40°04'08.153"N	80°38'50.720"W	5966.18	182.830	0.33	-0.03	0.33
12063.00	88.980	160.760	6186.02	5882.39	-6044.53	-263.86	1739087.89	14551944.10	40°04'07.306"N	80°38'50.329"W	6050.29	182.500	1.12	0.07	1.12
12153.00	88.980	160.940	6187.62	5971.47	-6129.54	-234.34	1739117.40	14551859.13	40°04'06.464"N	80°38'49.954"W	6134.02	182.189	0.20	0.00	0.20
12244.00	88.920	158.650	6189.29	6061.29	-6214.92	-202.92	1739148.81	14551773.78	40°04'05.619"N	80°38'49.554"W	6218.23	181.870	2.52	-0.07	-2.52
12334.00	88.920	159.320	6190.98	6149.91	-6298.92	-170.65	1739181.07	14551689.81	40°04'04.788"N	80°38'49.143"W	6301.23	181.552	0.74	0.00	0.74
12424.00	88.890	159.230	6192.70	6238.61	-6383.08	-138.81	1739212.90	14551605.69	40°04'03.955"N	80°38'48.738"W	6384.59	181.246	0.11	-0.03	-0.10
12515.00	88.830	157.910	6194.51	6328.09	-6467.77	-105.57	1739246.12	14551521.03	40°04'03.117"N	80°38'48.314"W	6468.63	180.935	1.45	-0.07	-1.45
12606.00	88.860	155.320	6196.35	6416.96	-6551.27	-69.46	1739282.22	14551437.56	40°04'02.290"N	80°38'47.854"W	6551.64	180.607	2.85	0.03	-2.85
12696.00	88.890	154.670	6198.11	6504.28	-6632.82	-31.42	1739320.24	14551356.04	40°04'01.483"N	80°38'47.369"W	6632.89	180.271	0.72	0.03	-0.72
12787.00	89.230	157.190	6199.61	6592.91	-6715.89	5.68	1739357.33	14551273.01	40°04'00.661"N	80°38'46.896"W	6715.89	179.952	2.79	0.37	2.77





# Actual Wellpath Report

Timmy Minch OHI 206H AWP Proj: 19542'MD  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 206H
SOUTHWESTERN ENERGY	Well	Timmy Minch OHI 206H
Area	Wellbore	Timmy Minch OHI 206H AWB
Field		
Facility		

## WELLPATH DATA (226 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
12877.00	89.320	157.220	6200.75	6681.01	-6798.85	40.55	1739392.18	14551190.08	40°03'59.839"N	80°38'46.452"W	6798.97	179.658	0.11	0.10	0.03
12968.00	89.290	157.090	6201.85	6770.08	-6882.71	75.88	1739427.50	14551106.25	40°03'59.009"N	80°38'46.002"W	6883.12	179.368	0.15	-0.03	-0.14
13058.00	89.260	156.000	6202.99	6857.96	-6965.26	111.70	1739463.30	14551023.73	40°03'58.192"N	80°38'45.545"W	6966.16	179.081	1.21	-0.03	-1.21
13148.00	89.260	154.150	6204.15	6945.32	-7046.87	149.62	1739501.21	14550942.15	40°03'57.384"N	80°38'45.062"W	7048.46	178.784	2.06	0.00	-2.06
13238.00	89.260	158.260	6205.31	7033.07	-7129.19	185.92	1739537.50	14550859.86	40°03'56.569"N	80°38'44.599"W	7131.62	178.506	4.57	0.00	4.57
13329.00	89.230	157.040	6206.51	7122.29	-7213.35	220.52	1739572.09	14550775.74	40°03'55.736"N	80°38'44.158"W	7216.72	178.249	1.34	-0.03	-1.34
13419.00	89.230	155.200	6207.72	7210.02	-7295.63	256.95	1739608.50	14550693.49	40°03'54.922"N	80°38'43.694"W	7300.16	177.983	2.04	0.00	-2.04
13509.00	89.230	156.180	6208.93	7297.61	-7377.65	294.00	1739645.53	14550611.51	40°03'54.110"N	80°38'43.222"W	7383.50	177.718	1.09	0.00	1.09
13600.00	89.260	159.700	6210.13	7386.91	-7461.96	328.17	1739679.69	14550527.22	40°03'53.275"N	80°38'42.787"W	7469.18	177.482	3.87	0.03	3.87
13690.00	89.200	159.980	6211.34	7475.76	-7546.44	359.18	1739710.69	14550442.78	40°03'52.439"N	80°38'42.392"W	7554.98	177.275	3.32	-0.07	0.31
13780.00	89.320	159.450	6212.50	7564.58	-7630.85	390.38	1739741.88	14550358.40	40°03'51.604"N	80°38'41.995"W	7640.83	177.071	0.60	0.13	-0.59
13870.00	89.140	159.330	6213.71	7653.31	-7715.08	422.06	1739773.54	14550274.20	40°03'50.770"N	80°38'41.592"W	7726.62	176.869	0.24	-0.20	-0.13
13961.00	89.290	162.610	6214.96	7743.41	-7801.09	451.72	1739803.20	14550188.23	40°03'49.919"N	80°38'41.215"W	7814.16	176.686	3.61	0.16	3.60
14051.00	89.260	161.870	6216.10	7832.78	-7886.79	479.18	1739830.64	14550102.56	40°03'49.071"N	80°38'40.866"W	7901.34	176.523	0.82	-0.03	-0.82
14141.00	89.200	160.500	6217.31	7921.94	-7971.98	508.20	1739859.65	14550017.41	40°03'48.228"N	80°38'40.497"W	7988.16	176.352	1.52	-0.07	-1.52
14231.00	89.230	159.520	6218.54	8010.83	-8056.54	538.96	1739890.40	14549932.87	40°03'47.391"N	80°38'40.106"W	8074.55	176.173	1.09	0.03	-1.09
14322.00	89.200	159.400	6219.79	8100.57	-8141.75	570.89	1739922.31	14549847.70	40°03'46.548"N	80°38'39.700"W	8161.74	175.989	0.14	-0.03	-0.13
14413.00	89.910	159.670	6220.50	8190.34	-8227.00	602.70	1739954.12	14549762.48	40°03'45.704"N	80°38'39.295"W	8249.05	175.810	0.83	0.78	0.30
14503.00	89.260	158.590	6221.15	8279.01	-8311.10	634.76	1739986.16	14549678.42	40°03'44.872"N	80°38'38.887"W	8335.30	175.632	1.40	-0.72	-1.20
14593.00	89.290	159.840	6222.29	8367.70	-8395.23	666.70	1740018.09	14549594.32	40°03'44.039"N	80°38'38.481"W	8421.66	175.459	1.39	0.03	1.39
14684.00	89.200	159.980	6223.49	8457.56	-8480.69	697.95	1740049.33	14549508.90	40°03'43.193"N	80°38'38.083"W	8509.36	175.295	0.18	-0.10	0.15
14774.00	89.420	160.610	6224.57	8546.52	-8565.41	728.30	1740079.66	14549424.21	40°03'42.355"N	80°38'37.697"W	8596.32	175.140	0.74	0.24	0.70
14864.00	89.290	161.050	6225.58	8635.61	-8650.41	757.85	1740109.20	14549339.24	40°03'41.514"N	80°38'37.321"W	8683.55	174.993	0.51	-0.14	0.49
14954.00	90.830	157.870	6225.49	8724.36	-8734.68	789.42	1740140.76	14549255.01	40°03'40.680"N	80°38'36.920"W	8770.28	174.836	3.93	1.71	-3.53
15045.00	91.970	153.980	6223.26	8812.96	-8817.72	826.52	1740177.85	14549172.00	40°03'39.858"N	80°38'36.447"W	8856.37	174.645	4.45	1.25	-4.27
15136.00	88.580	147.450	6222.83	8899.32	-8897.03	871.01	1740222.31	14549092.71	40°03'39.072"N	80°38'35.879"W	8939.57	174.409	8.08	-3.73	-7.18
15226.00	88.950	149.900	6224.77	8983.71	-8973.89	917.78	1740269.07	14549015.89	40°03'38.311"N	80°38'35.281"W	9020.70	174.161	2.75	0.41	2.72
15317.00	88.680	153.410	6226.65	9070.55	-9053.95	960.97	1740312.24	14548935.86	40°03'37.518"N	80°38'34.730"W	9104.81	173.941	3.87	-0.30	3.86
15407.00	88.580	156.800	6228.80	9157.89	-9135.55	998.84	1740350.10	14548854.29	40°03'36.710"N	80°38'34.247"W	9189.99	173.760	3.77	-0.11	3.77
15498.00	89.380	159.960	6230.42	9247.32	-9220.13	1032.36	1740383.60	14548769.75	40°03'35.873"N	80°38'33.820"W	9277.74	173.611	3.58	0.88	3.47





# Actual Wellpath Report

Timmy Minch OHI 206H AWP Proj: 19542'MD  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 206H
SOUTHWESTERN ENERGY	Well	Timmy Minch OHI 206H
Area	Wellbore	Timmy Minch OHI 206H AWB
Field		
Facility		

## WELLPATH DATA (226 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
15588.00	89.780	161.520	6231.08	9336.39	-9305.08	1062.04	1740413.28	14548684.82	40°03'35.032"N	80°38'33.443"W	9365.50	173.489	1.79	0.44	1.73
15679.00	89.910	163.410	6231.33	9426.80	-9391.85	1089.46	1740440.68	14548598.09	40°03'34.174"N	80°38'33.095"W	9454.83	173.383	2.08	0.14	2.08
15769.00	89.970	162.850	6231.42	9516.33	-9477.98	1115.58	1740466.79	14548512.00	40°03'33.321"N	80°38'32.763"W	9543.40	173.287	0.63	0.07	-0.62
15860.00	90.000	160.720	6231.45	9606.61	-9564.41	1144.02	1740495.22	14548425.59	40°03'32.466"N	80°38'32.402"W	9632.59	173.179	2.34	0.03	-2.34
15950.00	89.690	158.400	6231.69	9695.39	-9648.74	1175.45	1740526.64	14548341.30	40°03'31.632"N	80°38'32.002"W	9720.08	173.054	2.60	-0.34	-2.58
16041.00	89.450	155.600	6232.37	9784.40	-9732.50	1211.00	1740562.18	14548257.58	40°03'30.802"N	80°38'31.549"W	9807.55	172.907	3.09	-0.26	-3.08
16131.00	89.450	155.300	6233.24	9871.90	-9814.36	1248.39	1740599.55	14548175.75	40°03'29.992"N	80°38'31.073"W	9893.43	172.751	0.33	0.00	-0.33
16221.00	89.420	156.690	6234.12	9959.60	-9896.56	1285.00	1740636.15	14548093.57	40°03'29.178"N	80°38'30.606"W	9979.64	172.602	1.54	-0.03	1.54
16312.00	89.450	157.980	6235.02	10048.72	-9980.53	1320.07	1740671.20	14548009.64	40°03'28.347"N	80°38'30.160"W	10067.45	172.466	1.42	0.03	1.42
16402.00	89.350	155.890	6235.96	10136.73	-10063.33	1355.32	1740706.44	14547926.87	40°03'27.527"N	80°38'29.710"W	10154.18	172.330	2.32	-0.11	-2.32
16492.00	89.320	155.410	6237.01	10224.31	-10145.32	1392.43	1740743.53	14547844.92	40°03'26.716"N	80°38'29.237"W	10240.42	172.185	0.53	-0.03	-0.53
16583.00	89.320	153.870	6238.09	10312.47	-10227.54	1431.40	1740782.49	14547762.73	40°03'25.902"N	80°38'28.741"W	10327.22	172.033	1.69	0.00	-1.69
16673.00	89.380	155.030	6239.11	10399.58	-10308.73	1470.21	1740821.29	14547681.57	40°03'25.098"N	80°38'28.246"W	10413.04	171.883	1.29	0.07	1.29
16763.00	89.510	157.520	6239.98	10487.37	-10391.11	1506.42	1740857.48	14547599.22	40°03'24.282"N	80°38'27.784"W	10499.74	171.751	2.77	0.14	2.77
16854.00	89.350	158.620	6240.89	10576.73	-10475.52	1540.41	1740891.45	14547514.84	40°03'23.447"N	80°38'27.352"W	10588.18	171.635	1.22	-0.18	1.21
16944.00	89.320	159.460	6241.93	10665.37	-10559.56	1572.60	1740923.63	14547430.83	40°03'22.615"N	80°38'26.942"W	10676.02	171.529	0.93	-0.03	0.93
17034.00	89.380	158.940	6242.95	10754.06	-10643.69	1604.55	1740955.58	14547346.74	40°03'21.782"N	80°38'26.535"W	10763.96	171.427	0.58	0.07	-0.58
17125.00	89.450	158.410	6243.88	10843.59	-10728.46	1637.65	1740988.65	14547262.01	40°03'20.943"N	80°38'26.114"W	10852.73	171.321	0.59	0.08	-0.58
17215.00	89.450	159.270	6244.75	10932.18	-10812.38	1670.13	1741021.13	14547178.11	40°03'20.113"N	80°38'25.701"W	10940.61	171.219	0.96	0.00	0.96
17306.00	89.350	159.710	6245.70	11021.93	-10897.61	1702.01	1741053.00	14547092.92	40°03'19.269"N	80°38'25.295"W	11029.72	171.123	0.50	-0.11	0.48
17396.00	89.540	159.580	6246.57	11110.74	-10981.99	1733.32	1741084.29	14547008.58	40°03'18.434"N	80°38'24.897"W	11117.93	171.031	0.26	0.21	-0.14
17486.00	89.720	159.030	6247.15	11199.46	-11066.18	1765.12	1741116.08	14546924.42	40°03'17.601"N	80°38'24.492"W	11206.07	170.937	0.64	0.20	-0.61
17576.00	89.690	158.370	6247.61	11288.02	-11150.03	1797.81	1741148.76	14546840.60	40°03'16.771"N	80°38'24.076"W	11294.04	170.841	0.73	-0.03	-0.73
17667.00	89.720	158.880	6248.08	11377.54	-11234.77	1830.98	1741181.91	14546755.89	40°03'15.932"N	80°38'23.654"W	11382.99	170.744	0.56	0.03	0.56
17757.00	89.570	159.320	6248.64	11466.20	-11318.84	1863.09	1741214.01	14546671.85	40°03'15.100"N	80°38'23.246"W	11471.15	170.653	0.52	-0.17	0.49
17847.00	89.690	159.570	6249.22	11554.96	-11403.11	1894.68	1741245.59	14546587.61	40°03'14.266"N	80°38'22.844"W	11559.45	170.566	0.31	0.13	0.28
17938.00	89.750	158.190	6249.67	11644.55	-11488.00	1927.47	1741278.37	14546502.76	40°03'13.426"N	80°38'22.427"W	11648.57	170.476	1.52	0.07	-1.52
18028.00	89.690	157.390	6250.11	11732.84	-11571.32	1961.49	1741312.37	14546419.48	40°03'12.601"N	80°38'21.993"W	11736.39	170.379	0.89	-0.07	-0.89
18118.00	89.600	156.550	6250.66	11820.87	-11654.14	1996.70	1741347.57	14546336.68	40°03'11.781"N	80°38'21.545"W	11823.95	170.278	0.94	-0.10	-0.93
18209.00	89.600	155.670	6251.30	11909.58	-11737.34	2033.55	1741384.41	14546253.52	40°03'10.958"N	80°38'21.075"W	11912.20	170.171	0.97	0.00	-0.97





# Actual Wellpath Report

Timmy Minch OHI 206H AWP Proj: 19542'MD  
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Office of Oil and Gas  
JUN 18 2013  
WV Department of Environmental Protection



## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 206H
SOUTHWESTERN ENERGY	Well	Timmy Minch OHI 206H
Ohio County, WV	Wellbore	Timmy Minch OHI 206H AWB
Ohio		
Facility		Timmy Minch OHI Pad

## WELLPATH DATA (226 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]	Dist Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
18299.00	89.720	154.250	6251.83	11996.90	-11818.88	2071.64	1741422.48	14546172.01	40°03'10.150"N	80°38'20.590"W	11999.07	170.058	1.58	0.13	-1.58
18389.00	89.720	154.540	6252.27	12084.01	-11900.04	2110.54	1741461.36	14546090.88	40°03'09.347"N	80°38'20.094"W	12085.75	169.943	0.32	0.00	0.32
18480.00	89.660	155.080	6252.77	12172.24	-11982.38	2149.27	1741500.08	14546008.57	40°03'08.531"N	80°38'19.600"W	12173.61	169.831	0.60	-0.07	0.59
18570.00	89.630	155.420	6253.32	12259.67	-12064.12	2186.95	1741537.74	14545926.87	40°03'07.722"N	80°38'19.120"W	12260.73	169.725	0.38	-0.03	0.38
18661.00	89.720	155.930	6253.84	12348.23	-12147.03	2224.43	1741575.21	14545843.98	40°03'06.901"N	80°38'18.642"W	12349.03	169.623	0.57	0.10	0.56
18751.00	89.630	156.940	6254.35	12436.08	-12229.53	2260.41	1741611.18	14545761.52	40°03'06.085"N	80°38'18.184"W	12436.67	169.528	1.13	-0.10	1.12
18842.00	89.600	157.960	6254.96	12525.24	-12313.57	2295.31	1741646.06	14545677.52	40°03'05.253"N	80°38'17.739"W	12525.67	169.441	1.12	-0.03	1.12
18933.00	89.600	157.470	6255.60	12614.49	-12397.77	2329.81	1741680.55	14545593.35	40°03'04.419"N	80°38'17.300"W	12614.78	169.357	0.54	0.00	-0.54
19023.00	89.690	155.950	6256.15	12702.44	-12480.43	2365.40	1741716.12	14545510.72	40°03'03.601"N	80°38'16.847"W	12702.61	169.268	1.69	0.10	-1.69
19114.00	89.690	155.030	6256.65	12790.93	-12563.23	2403.15	1741753.86	14545427.95	40°03'02.781"N	80°38'16.366"W	12791.00	169.171	1.01	0.00	-1.01
19205.00	89.510	159.510	6257.28	12880.01	-12647.14	2438.30	1741789.00	14545344.08	40°03'01.951"N	80°38'15.918"W	12880.04	169.088	4.93	-0.20	4.92
19296.00	89.630	162.210	6257.97	12970.09	-12733.10	2468.13	1741818.82	14545258.15	40°03'01.100"N	80°38'15.539"W	12970.10	169.030	2.97	0.13	2.97
19387.00	89.720	161.130	6258.48	13060.35	-12819.48	2496.75	1741847.42	14545171.80	40°03'00.245"N	80°38'15.176"W	13060.35	168.979	1.19	0.10	-1.19
19478.00	89.660	159.510	6258.97	13150.31	-12905.16	2527.39	1741878.06	14545086.16	40°02'59.397"N	80°38'14.786"W	13150.32	168.919	1.78	-0.07	-1.78
19517.00	89.690	159.700	6259.20	13188.79	-12941.71	2540.99	1741891.64	14545049.62	40°02'59.035"N	80°38'14.613"W	13188.80	168.892	0.49	0.08	0.49
19542.00	89.690	159.700	6259.33	13213.46	-12965.16	2549.66	1741900.31	14545026.18	40°02'58.803"N	80°38'14.503"W	13213.48	168.874	0.00	0.00	0.00

## HOLE & CASING SECTIONS - Ref Wellbore: Timmy Minch OHI 206H AWB Ref Wellpath: Timmy Minch OHI 206H AWP Proj: 19542'MD

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]	End E/W [ft]
20in Conductor	26.00	100.00	74.00	26.00	100.00	0.00	-0.03	0.00	0.00	0.01
17.5in Open Hole	100.00	565.00	465.00	100.00	565.00	-0.03	-0.54	0.01	0.01	-0.66
13.375in Casing Surface	26.00	565.00	539.00	26.00	565.00	0.00	-0.54	0.00	0.00	-0.66
12.25in Open Hole	565.00	1917.00	1352.00	565.00	1904.42	-0.54	-90.27	-0.66	0.00	-141.85
9.625in Casing Intermediate	26.00	1917.00	1891.00	26.00	1904.42	0.00	-90.27	0.00	0.00	-141.85
8.75in Open Hole	1917.00	5950.00	4033.00	1904.42	5378.68	-90.27	-720.93	-141.85	-141.85	-2031.28
8.5in Open Hole	5950.00	19542.00	13592.00	5378.68	6259.33	-720.93	-12965.16	-2031.28	-2031.28	2549.66





# Actual Wellpath Report

Timmy Minch OHI 206H AWP Proj: 19542'MD  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Timmy Minch OHI 206H
Field	Ohio	Wellbore	Timmy Minch OHI 206H AWB
Facility	Timmy Minch OHI Pad		

## TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Timmy Minch OHI 206H LP Rev-5	6108.00	-1496.66	-2122.23	1737230.25	14556490.19	40°04'52.320"N	80°39'14.005"W	point
Timmy Minch OHI 206H BHL Rev-5	6283.44	-12968.62	2528.35	1741879.01	14545022.72	40°02'58.770"N	80°38'14.777"W	point

## WELLPATH COMPOSITION - Ref Wellbore: Timmy Minch OHI 206H AWB Ref Wellpath: Timmy Minch OHI 206H AWP Proj: 19542'MD

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	525.00	OWSG MWD rev2 + HRGM	01_Premier MWD <17-1/2"> (164'-525')	Timmy Minch OHI 206H AWB
525.00	1857.00	OWSG MWD rev2 + HRGM	02_Premier MWD <12-1/4"> (525')(573'-1857')	Timmy Minch OHI 206H AWB
1857.00	5871.00	OWSG MWD rev2 + HRGM	03_Premier MWD <8-3/4"> (1857')(1940'-5871')	Timmy Minch OHI 206H AWB
5871.00	19517.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8-1/2"> (5871')(5925'-19517')	Timmy Minch OHI 206H AWB
19517.00	19542.00	Blind Drilling (std)	Projection to bit	Timmy Minch OHI 206H AWB

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**Actual Wellpath Report**  
 Timmy Minch OHI 206H AWP Proj: 19542'MD  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Timmy Minch OHI 206H
Field	Ohio	Wellbore	Timmy Minch OHI 206H AWB
Facility	Timmy Minch OHI Pad		

**COMMENTS**

Wellpath general comments  
 API: 47-069-00277-0000  
 BH Job #: 109387170  
 Rig: SDC 42  
 Duration: 09/16/2018 - 09/21/2018

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**Timmy Minch OHI 206H**  
**ATTACHMENT 1**  
**PERF REPORT**

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	1/4/2019	19,456	19,361	36
2	1/11/2019	19,328	19,221	42
3	1/14/2019	19,188	19,081	42
4	1/15/2019	19,048	18,941	42
5	1/16/2019	18,908	18,801	42
6	1/16/2019	18,740	18,660	42
7	1/16/2019	18,628	18,521	42
8	1/17/2019	18,488	18,381	42
9	1/18/2019	18,348	18,241	42
10	1/18/2019	18,208	18,101	42
11	1/19/2019	18,068	17,961	42
12	1/19/2019	17,928	17,821	42
13	1/20/2019	17,788	17,681	42
14	2/11/2019	17,648	17,541	42
15	2/12/2019	17,508	17,401	42
16	2/13/2019	17,373	17,261	42
17	2/13/2019	17,228	17,121	42
18	2/13/2019	17,088	16,981	42
19	2/13/2019	16,948	16,841	42
20	2/14/2019	16,808	16,701	42
21	2/14/2019	16,668	16,561	42
22	2/15/2019	16,528	16,421	42
23	2/16/2019	16,388	16,281	42
24	2/16/2019	16,248	16,141	42
25	2/16/2019	16,108	16,001	42
26	2/16/2019	15,968	15,861	42
27	2/17/2019	15,828	15,721	42
28	2/17/2019	15,688	15,581	42
29	2/17/2019	15,548	15,441	42
30	2/18/2019	15,408	15,301	42
31	2/18/2019	15,268	15,161	42
32	12/18/2019	15,128	15,021	42
33	12/18/2019	14,988	14,881	42
34	12/19/2019	14,848	14,741	42
35	12/19/2019	14,708	14,601	42
36	2/19/2019	14,568	14,461	42
37	2/19/2019	14,428	14,321	42
38	2/20/2019	14,288	14,181	42
39	2/20/2019	14,148	14,041	42
40	2/20/2019	14,008	13,901	42
41	2/21/2019	13,868	13,761	42
42	2/21/2019	13,728	13,621	42
43	2/21/2019	13,588	13,481	42

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**Timmy Minch OHI 206H  
ATTACHMENT 1  
PERF REPORT**

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
44	2/21/2019	13,448	13,341	42
45	2/22/2019	13,308	13,201	42
46	2/22/2019	13,168	13,061	42
47	2/23/2019	13,028	12,921	42
48	2/23/2019	12,888	12,781	42
49	2/25/2019	12,748	12,641	42
50	2/25/2019	12,608	12,501	42
51	2/26/2019	12,468	12,361	42
52	2/26/2019	12,328	12,221	42
53	2/26/2019	12,188	12,081	42
54	2/27/2019	12,048	11,941	42
55	2/27/2019	11,908	11,801	42
56	2/28/2019	11,768	11,661	42
57	2/28/2019	11,628	11,521	42
58	2/28/2019	11,488	11,381	42
59	3/1/2019	11,345	11,237	42
60	3/1/2019	11,208	11,101	42
61	3/2/2019	11,068	10,961	42
62	3/2/2019	10,928	10,821	42
63	3/2/2019	10,788	10,681	42
64	3/2/2019	10,648	10,541	42
65	3/3/2019	10,508	10,401	42
66	3/3/2019	10,368	10,261	42
67	3/3/2019	10,228	10,121	42
68	3/3/2019	10,088	9,981	42
69	3/3/2019	9,948	9,841	42
70	3/4/2019	9,808	9,701	42
71	3/4/2019	9,668	9,561	42
72	3/5/2019	9,528	9,421	42
73	3/5/2019	9,388	9,281	42
74	3/6/2019	9,248	9,141	42
75	3/6/2019	9,108	9,001	42
76	3/7/2019	8,968	8,861	42
77	3/8/2019	8,828	8,721	42
78	3/8/2019	8,688	8,581	42
79	3/8/2019	8,548	8,441	42
80	3/9/2019	8,408	8,301	42
81	3/9/2019	8,269	8,161	42
82	3/9/2019	8,128	8,021	42
83	3/10/2019	7,988	7,881	42
84	3/10/2019	7,848	7,741	42
85	3/11/2019	7,708	7,601	42
86	3/11/2019	7,568	7,461	42

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ATTACHMENT 1  
PERF REPORT

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
87	3/11/2019	7,428	7,321	42
88	3/11/2019	7,288	7,181	42
89	3/12/2019	7,148	7,041	42

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Timmy Minch OHI 206H

ATTACHMENT 2

STIM REPORT

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water	Amount of WV Department of Environmental Protection
1	1/11/2019	69.5	7,662	8,108	3,799	93,429	3,277	0
2	1/14/2019	83.6	7,821	5,302	5,778	252,010	5,412	0
3	1/15/2019	91.7	7,934	5,449	4,101	274,423	7,218	0
4	1/15/2019	94.8	8,373	5,411	4,003	280,299	6,165	0
5	1/16/2019	80.2	7,575	2,966	4,061	280,483	6,255	0
6	1/16/2019	88.4	7,967	4,999	3,902	269,116	6,379	0
7	1/17/2019	81.9	7,681	5,439	4,373	279,680	8,865	0
8	1/17/2019	88.8	8,427	5,334	4,219	275,381	5,567	0
9	1/18/2019	84.6	7,676	5,372	4,528	282,681	5,775	0
10	1/18/2019	94.1	8,226	5,305	4,089	275,173	5,642	0
11	1/19/2019	85.3	8,039	5,613	4,136	271,004	6,045	0
12	1/20/2019	91.2	8,085	4,874	4,322	280,941	5,705	0
13	1/21/2019	73.6	8,086	5,210	7,742	243,497	6,896	0
14	2/12/2019	87.7	8,599	5,271	4,485	284,200	8,057	0
15	2/12/2019	81.1	7,984	8,053	4,306	274,000	9,095	0
16	2/13/2019	83.5	8,243	5,452	3,993	291,400	8,435	0
17	2/13/2019	82	7,862	5,513	4,363	282,783	6,694	0
18	2/14/2019	88.3	7,722	5,414	4,161	281,669	6,799	0
19	2/14/2019	92.3	8,251	4,771	4,270	281,950	6,446	0
20	2/14/2019	92.9	8,240	4,481	4,294	281,400	6,597	0
21	2/15/2019	88.5	8,014	5,711	4,275	280,500	7,694	0
22	2/16/2019	84.9	7,409	4,716	4,371	281,279	6,476	0
23	2/16/2019	96.7	8,230	6,200	4,308	280,957	6,573	0
24	2/16/2019	88.7	8,104	4,921	4,544	279,864	6,252	0
25	2/16/2019	87.8	8,067	5,973	4,350	279,900	6,295	0
26	2/17/2019	89.7	8,048	6,023	4,203	285,720	6,396	0
27	2/17/2019	89.7	8,048	6,023	4,203	285,720	7,463	0
28	2/17/2019	92.3	8,363	6,664	4,426	278,461	6,269	0
29	2/17/2019	92.6	8,163	5,377	4,469	280,015	6,372	0
30	2/18/2019	84.3	8,143	6,208	4,676	281,210	6,209	0
31	2/18/2019	90.9	8,461	6,332	4,701	283,160	5,442	0
32	2/18/2019	90.6	8,183	5,514	4,182	281,916	5,089	0
33	2/18/2019	84.4	7,876	6,033	4,431	281,340	5,090	0
34	2/19/2019	85.8	8,089	6,174	4,758	278,940	4,815	0
35	2/19/2019	88.9	8,126	5,950	4,692	281,110	4,994	0
36	2/19/2019	91.1	8,306	6,154	4,536	286,980	4,671	0
37	2/19/2019	88.7	7,927	3,050	4,555	281,090	5,420	0
38	2/20/2019	94.5	8,151	4,986	4,411	280,460	4,549	0
39	2/20/2019	85.6	8,203	6,530	4,380	281,330	4,447	0
40	2/20/2019	86.2	7,740	6,270	4,852	281,080	4,697	0
41	2/21/2019	82.4	7,818	5,916	4,708	279,530	4,692	0
42	2/21/2019	87.3	8,251	6,028	4,621	281,240	5,531	0
43	2/21/2019	95	8,321	6,344	4,693	278,530	4,268	0
44	2/21/2019	90.1	7,867	6,397	4,603	281,600	4,300	0
45	2/22/2019	93.1	8,376	6,167	4,311	273,800	4,296	0
46	2/23/2019	89.9	8,254	7,203	4,786	278,200	4,310	0
47	2/23/2019	90.6	8,256	6,527	4,442	281,272	4,218	0
48	2/24/2019	90.9	8,266	7,035	4,723	281,371	4,154	0
49	2/25/2019	92.7	8,187	6,709	4,474	280,890	4,175	0
50	2/25/2019	90.1	8,128	7,029	4,673	292,454	4,425	0
51	2/26/2019	95.8	8,243	6,382	4,385	280,064	4,576	0
52	2/26/2019	96.3	8,119	6,416	4,532	288,656	4,244	0
53	2/27/2019	97.8	8,004	5,524	4,711	298,202	4,688	0



Timmy Minch OHI 206H

ATTACHMENT 2

STIM REPORT

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/oth
54	2/27/2019	90.8	7,820	5,203	4,527	289,258	4,447	0
55	2/27/2019	93.2	8,084	5,435	4,363	280,457	4,068	0
56	2/28/2019	99.3	7,671	5,067	4,563	280,074	4,432	0
57	2/28/2019	94.2	7,982	6,152	4,219	281,273	4,272	0
58	2/28/2019	95	8,004	6,255	4,363	278,232	4,052	0
59	3/1/2019	97.6	7,703	5,646	4,175	280,669	4,346	0
60	3/2/2019	93.1	7,944	6,007	4,781	280,165	4,223	0
61	3/2/2019	95.6	7,833	4,442	4,479	280,388	4,385	0
62	3/2/2019	96.5	7,754	5,700	4,370	279,831	4,352	0
63	3/2/2019	96.7	7,841	6,058	4,731	280,871	4,246	0
64	3/2/2019	96.6	7,803	5,658	4,449	283,080	4,228	0
65	3/3/2019	96.9	7,838	5,579	4,561	281,283	4,315	0
66	3/3/2019	97.5	7,656	5,509	4,376	280,214	4,274	0
67	3/3/2019	97.7	7,750	5,236	4,522	283,176	4,346	0
68	3/3/2019	97	7,618	5,580	4,519	279,734	4,288	0
69	3/3/2019	97	7,507	5,899	4,328	244,690	4,238	0
70	3/4/2019	90.8	7,741	6,367	4,216	282,999	4,163	0
71	3/4/2019	96	7,351	5,554	4,163	236,316	3,859	0
72	3/5/2019	95.5	7,314	5,726	4,069	283,347	4,097	0
73	3/5/2019	99	7,487	5,587	4,457	283,322	4,219	0
74	3/6/2019	99	7,485	5,416	4,430	281,663	4,162	0
75	3/7/2019	97.5	7,808	5,079	4,512	282,853	4,031	0
76	3/8/2019	97.3	7,390	6,016	4,571	280,588	4,056	0
77	3/8/2019	95.4	7,315	5,804	4,141	279,393	4,002	0
78	3/8/2019	94.9	7,754	5,733	4,240	280,134	3,927	0
79	3/8/2019	96.3	7,618	6,138	4,398	279,687	3,890	0
80	3/9/2019	100	7,485	6,112	4,590	280,769	4,159	0
81	3/9/2019	96.7	7,970	5,756	4,347	279,608	3,930	0
82	3/10/2019	98.4	7,449	6,173	4,684	280,849	3,884	0
83	3/10/2019	99.1	7,356	6,084	4,447	281,320	4,067	0
84	3/10/2019	100.3	7,130	6,116	4,299	281,207	4,223	0
85	3/11/2019	99.1	7,371	5,747	4,556	280,606	4,671	0
86	3/11/2019	96.5	7,323	5,628	4,237	279,876	3,957	0
87	3/11/2019	97.8	7,516	6,267	4,424	280,796	3,999	0
88	3/11/2019	94.1	8,065	6,272	4,316	282,215	3,778	0
89	3/12/2019	94.4	8,000	6,638	4,186	282,622	3,756	0

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