

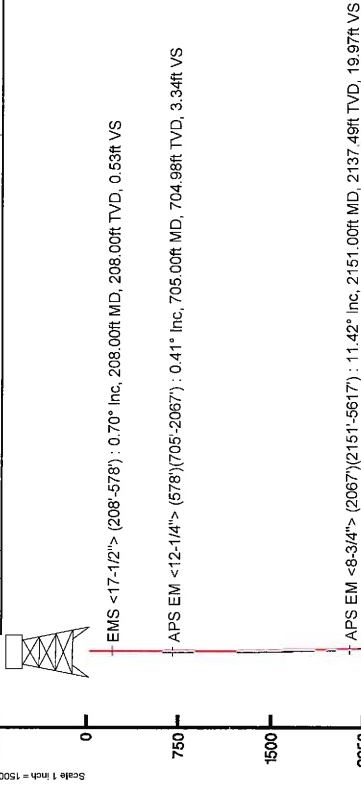
Location: Ohio County, WV
 Field: Ohio
 Facility: GW Rentals LLC OHI Pad
 Slot: Slot #605
 Well: GW Rentals LLC OHI 605H
 Wellbore: GW Rentals LLC OHI 605H PWB

Plot reference wellpath is GW Rentals LLC OHI 605H (Rev.A.1)

Grid System: NAD83 / UTM Zone 17 North, US feet
Norm Reference: Grid north
Scale: True distance
Depths are in feet
Created by: edsavar on 22/Dec/2015

Measured depths are referenced to SDC 41 (RKB)
 SDC 41 (RKB) to Mean Sea Level: 1273 feet
 Mean Sea Level to Mud line (At Slot: Slot #605): -1247 feet
 Coordinates are in feet referenced to Slot

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
GW Rentals LLC OHI Pad	14554083.800	40°04'27.462"N	80°33'56.508"W
Local N (ft)	Local E (ft)	Grid North (US ft)	Longitude
Slot #605	30.47	176°059.050	80°33'55.901"W
SDC 41 (RKB) to Mud line (At Slot: Slot #605)	47.15	14554114.360	
Mean Sea Level to Mud line (At Slot: Slot #605)	26ft		
SDC 41 (RKB) to Mean Sea Level	-1247ft		
	1273ft		



API: 47-069-00201-0000
 BHI Job #: 7663936
 Rig: SDC 41
 Duration: 12/18/2015-12/22/2015

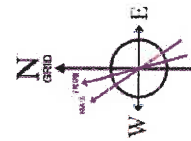
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (*/100ft)	VS (ft)
Tie On	26.00	0.000	78.030	26.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	78.030	1000.00	0.00	0.00	0.00	0.00
End of Build	1600.00	12.000	78.030	1794.16	17.31	81.66	1.50	11.26
End of Tangent	2235.00	12.000	78.030	2219.66	36.07	170.13	0.00	23.45
End of 3D Arc	2959.99	26.500	78.031	2902.29	85.51	403.33	2.00	55.59
Curve KOP	6341.48	26.500	78.031	5928.51	398.39	1879.34	0.00	258.02
Landing Pt.	7380.85	90.769	339.595	6535.00	1106.83	1939.79	9.00	981.08
BHL	14622.26	190.769	339.595	6438.00	7863.85	-581.30	0.00	7905.25

BHI AT Curve <8-1/2> (5617)(5679-14611) : 26.83° Inc, 5679.00ft MD, 5336.07ft TVD, 221.39ft VS

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Projected MD at TD: 14634' : 90.43° Inc, 14634.00ft MD, 6471.78ft TVD, 7905.83ft VS

1102/9/150



User specified (HDGM) Dip: 67.62° Field: 53035 NT
 Magnetic North is 8.31 degrees West of True North (at 04/Dec/2015)
 Grid North is 0.28 degrees East of True North
 To correct azimuth from True to Grid subtract 0.28 degrees
 To correct azimuth from Magnetic to Grid subtract 8.59 degrees



REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #605
Area	Ohio County, WV	Well	GW Rentals LLC OHI 605H
Field	Ohio	Wellbore	GW Rentals LLC OHI 605H AWB
Facility	GW Rentals LLC OHI Pad		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 4.0.1
North Reference	Grid	User	Edsaryar
Scale	0.999617	Report Generated	22/Dec/2015 at 15:17
Convergence at slot	0.28° East	Database/Source file	WA_MPL_EASTERNUS_Defn/GW_Rentals_LLC_OHI_605H_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	30.47	47.15	1761959.05	14554114.36	40°04'27.761"N	80°33'55.901"W
Facility Reference Pt			1761911.92	14554083.90	40°04'27.462"N	80°33'56.509"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.478"W

WELLPATH DATUM

Calculation method	Minimum curvature	SDC 41 (RKB) to Facility Vertical Datum	1273.00ft
Horizontal Reference Pt	Slot	SDC 41 (RKB) to Mean Sea Level	1273.00ft
Vertical Reference Pt	SDC 41 (RKB)	SDC 41 (RKB) to Mud Line at Slot (Slot #605)	26.00ft
MD Reference Pt	SDC 41 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	355.78°

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Actual Wellpath Report

GW Rentals LLC OHI 605H AWP Proj: 14634'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #605
Area	Ohio County, WV	Well	GW Rentals LLC OHI 605H
Field	Ohio	Wellbore	GW Rentals LLC OHI 605H AWB
Facility	GW Rentals LLC OHI Pad		

WELLPATH DATA (173 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	294.470	0.00	0.00	0.00	0.00	1761959.05	14554114.36	40°04'27.761"N	80°33'55.901"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	294.470	26.00	0.00	0.00	0.00	1761959.05	14554114.36	40°04'27.761"N	80°33'55.901"W	0.00	0.000	0.00	0.00	0.00
208.00	0.700	294.470	208.00	0.53	0.46	-1.01	1761958.04	14554114.82	40°04'27.765"N	80°33'55.914"W	1.11	294.470	0.38	0.38	0.00
300.00	0.600	332.270	299.99	1.25	1.12	-1.75	1761957.30	14554115.48	40°04'27.772"N	80°33'55.923"W	2.08	302.648	0.47	-0.11	41.09
393.00	0.600	349.970	392.98	2.18	2.03	-2.06	1761956.99	14554116.39	40°04'27.781"N	80°33'55.927"W	2.89	314.597	0.20	0.00	19.03
486.00	0.300	286.670	485.98	2.75	2.58	-2.38	1761956.67	14554116.94	40°04'27.786"N	80°33'55.931"W	3.51	317.340	0.58	-0.32	-68.06
578.00	0.200	297.470	577.98	2.92	2.72	-2.75	1761956.30	14554117.08	40°04'27.788"N	80°33'55.936"W	3.87	314.712	0.12	-0.11	11.74
705.00	0.410	307.930	704.98	3.34	3.10	-3.31	1761955.75	14554117.46	40°04'27.792"N	80°33'55.943"W	4.53	313.204	0.17	0.17	8.24
798.00	0.270	120.600	797.98	3.44	3.20	-3.38	1761955.67	14554117.56	40°04'27.793"N	80°33'55.944"W	4.65	313.416	0.73	-0.15	185.67
890.00	1.390	102.860	889.97	2.99	2.84	-2.10	1761956.95	14554117.20	40°04'27.789"N	80°33'55.928"W	3.53	323.445	1.23	1.22	-19.28
983.00	1.990	109.850	982.93	2.00	2.04	0.51	1761959.56	14554116.40	40°04'27.781"N	80°33'55.894"W	2.10	14.144	0.68	0.65	7.52
1076.00	2.460	81.210	1075.86	1.50	1.80	4.01	1761963.05	14554116.16	40°04'27.778"N	80°33'55.849"W	4.39	65.849	1.28	0.51	-30.80
1168.00	3.760	74.380	1167.72	2.25	2.91	8.86	1761967.91	14554117.27	40°04'27.789"N	80°33'55.787"W	9.33	71.822	1.47	1.41	-7.42
1261.00	4.640	63.590	1260.47	4.27	5.40	15.17	1761974.21	14554119.76	40°04'27.813"N	80°33'55.705"W	16.10	70.389	1.27	0.95	-11.60
1354.00	5.430	67.640	1353.11	7.06	8.75	22.61	1761981.65	14554123.11	40°04'27.846"N	80°33'55.609"W	24.24	68.838	0.93	0.85	4.35
1446.00	6.550	73.470	1444.61	9.54	11.90	31.66	1761990.70	14554126.26	40°04'27.877"N	80°33'55.493"W	33.83	69.401	1.38	1.22	6.34
1539.00	8.070	75.810	1536.85	11.80	15.01	43.08	1762002.11	14554129.36	40°04'27.907"N	80°33'55.346"W	45.62	70.790	1.67	1.63	2.52
1632.00	9.130	75.930	1628.81	14.19	18.40	56.56	1762015.59	14554132.76	40°04'27.940"N	80°33'55.172"W	59.48	71.977	1.14	1.14	0.13
1724.00	9.070	80.080	1719.65	16.16	21.43	70.79	1762029.81	14554135.78	40°04'27.969"N	80°33'54.989"W	73.96	73.158	0.72	-0.07	4.51
1817.00	10.640	83.590	1811.27	17.22	23.65	86.54	1762045.56	14554138.00	40°04'27.990"N	80°33'54.786"W	89.71	74.716	1.81	1.69	3.77
1910.00	12.700	84.680	1902.35	17.74	25.56	105.25	1762064.26	14554139.91	40°04'28.008"N	80°33'54.545"W	108.31	76.353	2.23	2.22	1.17
2002.00	13.200	84.050	1992.01	18.25	27.58	125.77	1762084.77	14554141.93	40°04'28.027"N	80°33'54.281"W	128.76	77.630	0.56	0.54	-0.68
2067.00	12.740	83.580	2055.35	18.75	29.15	140.27	1762099.27	14554143.50	40°04'28.042"N	80°33'54.095"W	143.27	78.259	0.73	-0.71	-0.72
2151.00	11.420	79.830	2137.49	19.97	31.66	157.66	1762116.65	14554146.00	40°04'28.066"N	80°33'53.871"W	160.81	78.647	1.83	-1.57	-4.46
2187.00	11.430	78.540	2172.77	20.79	33.00	164.67	1762123.65	14554147.34	40°04'28.079"N	80°33'53.780"W	167.94	78.669	0.71	0.03	-3.58
2280.00	12.510	77.230	2243.75	23.45	37.05	183.52	1762142.50	14554151.40	40°04'28.118"N	80°33'53.538"W	187.23	78.586	1.20	1.16	-1.41
2372.00	14.680	78.440	2313.17	26.42	41.59	204.66	1762163.64	14554155.94	40°04'28.162"N	80°33'53.265"W	208.85	78.513	2.38	2.36	1.32
2465.00	17.250	78.300	2382.57	29.72	46.75	229.72	1762188.68	14554161.09	40°04'28.212"N	80°33'52.943"W	234.43	78.497	2.76	2.76	-0.15
2558.00	18.530	78.740	2451.09	33.33	52.43	257.71	1762216.66	14554166.77	40°04'28.267"N	80°33'52.582"W	262.99	78.500	1.38	1.38	0.47
2651.00	19.540	76.300	2518.09	37.70	59.00	287.32	1762246.26	14554173.34	40°04'28.330"N	80°33'52.201"W	293.31	78.396	1.38	1.09	-2.62

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Actual Wellpath Report

GW Rentals LLC OHI 605H AWP Proj: 14634'
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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #605
SOUTHWESTERN ENERGY	Well	GW Rentals LLC OHI 605H
Ohio County, WV	Wellbore	GW Rentals LLC OHI 605H AWB
Ohio		
GW Rentals LLC OHI Pad		

WELLPATH DATA (173 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]
2743.00	20.900	74.560	2705.32	43.43	67.01	318.09	1762277.01	14554181.35	40°04'28.408"N	80°33'51.805"W	325.07	78.103	1.62	1.48	-1.89
2836.00	23.380	74.860	2791.46	50.15	76.25	351.89	1762310.81	14554190.58	40°04'28.497"N	80°33'51.369"W	360.06	77.774	2.67	2.67	0.32
2929.00	25.540	75.000	2876.10	57.40	86.26	389.07	1762347.97	14554200.59	40°04'28.594"N	80°33'50.890"W	398.52	77.499	2.32	2.32	0.15
3022.00	26.750	77.380	2959.59	64.20	96.02	428.86	1762387.75	14554210.35	40°04'28.689"N	80°33'50.378"W	439.48	77.380	2.32	1.30	2.56
3114.00	25.750	84.170	3042.12	67.79	102.58	468.96	1762427.83	14554216.90	40°04'28.752"N	80°33'49.862"W	480.05	77.662	3.44	-1.09	7.38
3207.00	23.900	81.190	3126.53	69.87	107.52	507.68	1762466.53	14554221.84	40°04'28.799"N	80°33'49.363"W	518.94	78.043	2.40	-1.99	-3.20
3300.00	25.100	81.260	3211.15	72.93	113.40	545.79	1762504.63	14554227.72	40°04'28.855"N	80°33'48.873"W	557.45	78.263	1.29	1.29	0.08
3392.00	27.190	80.640	3293.73	76.35	119.78	585.82	1762544.65	14554234.10	40°04'28.916"N	80°33'48.357"W	597.95	78.444	2.29	2.27	-0.67
3485.00	28.420	83.730	3376.00	79.05	125.66	628.79	1762587.60	14554239.97	40°04'28.972"N	80°33'47.804"W	641.22	78.699	2.04	1.32	3.32
3578.00	28.340	80.770	3457.82	81.77	131.61	672.58	1762631.37	14554245.92	40°04'29.029"N	80°33'47.241"W	685.34	78.928	1.52	-0.09	-3.18
3671.00	26.810	79.260	3540.26	86.07	139.06	714.98	1762673.75	14554253.37	40°04'29.100"N	80°33'46.695"W	728.38	78.993	1.81	-1.65	-1.62
3763.00	26.590	78.960	3622.45	90.88	146.87	755.57	1762714.33	14554261.18	40°04'29.176"N	80°33'46.172"W	769.71	79.000	0.28	-0.24	-0.33
3856.00	27.930	76.840	3705.12	96.73	155.82	797.21	1762755.95	14554270.12	40°04'29.262"N	80°33'45.636"W	812.29	78.941	1.78	1.44	-2.28
3949.00	28.340	75.070	3787.13	104.22	166.46	839.75	1762798.47	14554280.76	40°04'29.365"N	80°33'45.088"W	856.09	78.788	1.00	0.44	-1.90
4041.00	27.490	72.950	3868.43	112.99	178.32	881.15	1762839.86	14554292.61	40°04'29.480"N	80°33'44.555"W	899.01	78.560	1.42	-0.92	-2.30
4134.00	26.570	73.780	3951.27	122.08	190.42	921.64	1762880.34	14554304.71	40°04'29.598"N	80°33'44.033"W	941.11	78.326	1.07	-0.99	0.89
4227.00	25.540	77.330	4034.82	129.35	200.63	961.18	1762919.86	14554314.91	40°04'29.697"N	80°33'43.524"W	981.89	78.210	2.01	-1.11	3.82
4319.00	25.090	78.980	4117.99	134.58	208.71	999.67	1762958.34	14554322.99	40°04'29.775"N	80°33'43.028"W	1021.23	78.207	0.91	-0.49	1.79
4412.00	25.480	77.290	4202.08	139.87	216.88	1038.54	1762997.19	14554331.15	40°04'29.854"N	80°33'42.528"W	1060.94	78.205	0.88	0.42	-1.82
4505.00	26.630	77.640	4285.63	145.77	225.74	1078.42	1763037.05	14554340.01	40°04'29.939"N	80°33'42.014"W	1101.79	78.177	1.25	1.24	0.38
4597.00	27.590	79.390	4367.52	151.06	234.08	1119.50	1763078.12	14554348.35	40°04'30.020"N	80°33'41.485"W	1143.71	78.190	1.36	1.04	1.90
4690.00	28.770	81.540	4449.50	155.11	241.33	1162.81	1763121.41	14554355.60	40°04'30.089"N	80°33'40.928"W	1187.59	78.275	1.67	1.27	2.31
4783.00	28.980	80.180	4530.94	158.97	248.47	1207.14	1763165.73	14554362.73	40°04'30.158"N	80°33'40.357"W	1232.45	78.369	0.74	0.23	-1.46
4876.00	28.710	78.530	4612.40	163.98	256.75	1251.23	1763209.80	14554371.02	40°04'30.237"N	80°33'39.789"W	1277.30	78.404	0.90	-0.29	-1.77
4968.00	26.010	76.010	4694.10	170.20	266.03	1292.47	1763251.02	14554380.28	40°04'30.327"N	80°33'39.258"W	1319.57	78.369	3.19	-2.93	-2.74
5061.00	23.260	78.000	4778.63	177.88	276.49	1329.78	1763288.32	14554390.74	40°04'30.429"N	80°33'38.778"W	1358.22	78.254	3.35	-2.96	-3.80
5154.00	24.040	78.000	4863.82	185.94	287.21	1365.51	1763324.03	14554401.45	40°04'30.533"N	80°33'38.317"W	1395.39	78.122	1.09	0.84	1.74
5247.00	24.540	78.330	4948.59	192.78	296.80	1402.54	1763361.05	14554411.04	40°04'30.626"N	80°33'37.840"W	1433.60	78.052	1.33	0.55	2.94
5340.00	25.420	77.460	5031.98	198.86	305.68	1440.37	1763398.87	14554419.92	40°04'30.712"N	80°33'37.353"W	1472.45	78.018	0.95	0.95	-0.10
5433.00	26.700	76.630	5115.51	205.32	315.10	1480.16	1763438.64	14554429.34	40°04'30.803"N	80°33'36.841"W	1513.32	77.982	1.42	1.42	-0.12

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #605
Area	Ohio County, WV	Well	GW Rentals LLC OHI 605H
Field	Ohio	Wellbore	GW Rentals LLC OHI 605H AWB
Facility	GW Rentals LLC OHI Pad		

WELLPATH DATA (173 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]
5524.00	26.790	76.460	5197.65	211.97	324.74	1520.45	1763478.91	14554438.97	40°04'30.896"N	80°33'36.322"W	1554.74	77.944	0.10	0.05	-0.18
5617.00	26.690	78.510	5280.71	218.01	333.81	1561.29	1763519.74	14554448.04	40°04'30.984"N	80°33'35.796"W	1596.58	77.932	1.00	-0.11	2.20
5679.00	26.830	79.140	5336.07	221.39	339.22	1588.68	1763547.12	14554453.44	40°04'31.036"N	80°33'35.443"W	1624.49	77.947	0.51	0.23	1.02
5772.00	26.800	79.770	5419.07	226.01	346.89	1629.92	1763588.35	14554461.12	40°04'31.110"N	80°33'34.912"W	1666.43	77.985	0.31	-0.03	0.68
5864.00	26.780	80.160	5501.19	230.21	354.12	1670.76	1763629.16	14554468.34	40°04'31.179"N	80°33'34.387"W	1707.87	78.033	0.19	-0.02	0.42
5957.00	26.620	79.540	5584.28	234.53	361.48	1711.89	1763670.28	14554475.70	40°04'31.250"N	80°33'33.857"W	1749.64	78.077	0.35	-0.17	-0.67
6050.00	25.940	78.630	5667.66	239.33	369.27	1752.32	1763710.69	14554483.49	40°04'31.325"N	80°33'33.336"W	1790.81	78.100	0.85	-0.73	-0.98
6142.00	25.870	77.810	5750.42	244.61	377.48	1791.67	1763750.03	14554491.69	40°04'31.404"N	80°33'32.830"W	1831.00	78.103	0.40	-0.08	-0.89
6235.00	26.530	78.520	5833.86	250.05	385.90	1831.85	1763790.20	14554500.11	40°04'31.485"N	80°33'32.312"W	1872.06	78.104	0.79	0.71	0.76
6328.00	26.730	78.300	5917.00	255.40	394.27	1872.69	1763831.02	14554508.48	40°04'31.566"N	80°33'31.786"W	1913.74	78.111	0.24	0.22	-0.24
6374.00	26.750	70.420	5958.09	259.49	399.84	1892.58	1763850.90	14554514.05	40°04'31.620"N	80°33'31.530"W	1934.35	78.071	7.70	0.04	-17.13
6420.00	27.410	62.580	5999.06	266.41	408.19	1911.74	1763870.05	14554522.39	40°04'31.702"N	80°33'31.283"W	1954.83	77.947	7.89	1.43	-17.04
6467.00	29.580	53.520	6040.39	276.87	420.08	1930.68	1763888.98	14554534.27	40°04'31.818"N	80°33'31.039"W	1975.85	77.725	10.28	4.62	-19.28
6513.00	30.210	45.390	6080.28	290.43	434.96	1948.05	1763906.35	14554549.15	40°04'31.964"N	80°33'30.814"W	1996.02	77.413	8.91	1.37	-17.67
6559.00	32.890	37.370	6119.50	307.28	453.02	1963.88	1763922.18	14554567.21	40°04'32.142"N	80°33'30.610"W	2015.46	77.010	10.81	5.83	-17.43
6605.00	35.960	30.210	6157.45	327.78	474.64	1978.27	1763936.56	14554588.81	40°04'32.355"N	80°33'30.423"W	2034.41	76.508	11.03	6.67	-15.57
6652.00	36.660	24.360	6195.34	351.49	499.35	1991.00	1763949.29	14554613.52	40°04'32.599"N	80°33'30.258"W	2052.67	75.920	7.52	1.49	-12.45
6698.00	37.670	18.480	6232.00	376.52	525.20	2001.13	1763959.41	14554639.36	40°04'32.854"N	80°33'30.126"W	2068.90	75.294	8.03	2.20	-12.78
6744.00	40.600	11.670	6267.70	403.90	553.21	2008.61	1763966.89	14554667.36	40°04'33.130"N	80°33'30.028"W	2083.40	74.601	11.30	6.37	-14.80
6791.00	44.110	6.960	6302.43	434.68	584.44	2013.69	1763971.97	14554698.58	40°04'33.438"N	80°33'29.960"W	2096.79	73.816	10.06	7.47	-10.02
6837.00	46.700	4.760	6334.73	466.92	617.02	2017.02	1763975.30	14554731.14	40°04'33.760"N	80°33'29.916"W	2109.29	72.991	6.58	5.63	-4.78
6883.00	50.350	3.720	6365.19	501.01	651.39	2019.56	1763977.83	14554765.49	40°04'34.100"N	80°33'29.881"W	2122.01	72.124	8.11	7.93	-2.26
6930.00	53.230	2.250	6394.26	537.64	688.26	2021.47	1763979.75	14554802.35	40°04'34.464"N	80°33'29.854"W	2135.43	71.198	6.60	6.13	-3.13
6976.00	57.530	359.910	6420.39	575.32	726.10	2022.17	1763980.44	14554840.18	40°04'34.838"N	80°33'29.842"W	2148.58	70.248	10.24	9.35	-5.09
7022.00	63.020	358.490	6443.19	615.18	766.02	2021.59	1763979.86	14554880.09	40°04'35.232"N	80°33'29.847"W	2161.85	69.247	12.24	11.93	-3.13
7069.00	66.420	357.790	6463.26	657.65	808.48	2019.96	1763978.23	14554922.53	40°04'35.652"N	80°33'29.865"W	2175.75	68.186	7.66	7.23	-2.79
7115.00	67.750	356.040	6481.17	700.01	850.78	2017.45	1763975.72	14554964.81	40°04'36.070"N	80°33'29.895"W	2189.50	67.134	3.66	2.89	-2.43
7161.00	72.330	355.010	6496.87	743.23	893.81	2013.46	1763971.73	14555007.83	40°04'36.496"N	80°33'29.944"W	2202.93	66.063	11.31	9.96	-5.72
7208.00	73.430	354.000	6510.71	788.02	938.25	2007.00	1763965.28	14555052.25	40°04'36.935"N	80°33'30.024"W	2215.48	64.944	7.20	2.34	-7.13
7254.00	76.550	347.450	6522.62	832.11	981.82	1998.33	1763956.61	14555095.80	40°04'37.366"N	80°33'30.133"W	2226.50	63.834	8.72	6.78	-5.67

05/26/2017

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REFERENCE WELLPATH IDENTIFICATION #1 & Gas

Operator	SOUTHWESTERN ENERGY	Slot	Slot #605
Area	Ohio County, WV	Well	GW Rentals LLC OHI 605H
Field	Ohio	Wellbore	GW Rentals LLC OHI 605H AWB
Facility	GW Rentals LLC OHI Pad		

WELLPATH DATA (173 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]
7300.00	81.200	345.040	6531.50	876.60	1025.64	1987.60	1763945.88	14555139.61	40°04'37.800"N	80°33'30.268"W	2236.62	62.705	11.34	10.11	-5.24
7348.00	87.630	342.590	6536.17	923.31	1071.49	1974.28	1763932.57	14555185.44	40°04'38.253"N	80°33'30.436"W	2246.31	61.510	14.33	13.40	-5.10
7393.00	90.280	341.500	6536.99	967.01	1114.29	1960.41	1763918.71	14555228.22	40°04'38.677"N	80°33'30.612"W	2254.96	60.386	6.37	5.89	-2.42
7440.00	90.280	340.710	6536.76	1012.48	1158.76	1945.19	1763903.49	14555272.67	40°04'39.117"N	80°33'30.805"W	2264.18	59.218	1.68	0.00	-1.68
7532.00	90.400	336.770	6536.21	1100.42	1244.48	1911.84	1763870.16	14555358.36	40°04'39.966"N	80°33'31.229"W	2281.20	56.939	4.28	0.13	-4.28
7625.00	90.280	335.110	6535.66	1187.89	1329.39	1873.93	1763832.26	14555443.24	40°04'40.807"N	80°33'31.711"W	2297.58	54.648	1.79	-0.13	-1.78
7718.00	90.280	336.130	6535.21	1275.19	1414.10	1835.54	1763793.88	14555527.91	40°04'41.646"N	80°33'32.199"W	2317.08	52.389	1.10	0.00	1.10
7810.00	90.370	336.420	6534.68	1361.91	1498.32	1798.52	1763756.88	14555612.10	40°04'42.480"N	80°33'32.670"W	2340.87	50.203	0.33	0.10	0.32
7903.00	90.340	338.180	6534.11	1450.11	1584.11	1762.64	1763721.01	14555697.86	40°04'43.329"N	80°33'33.126"W	2369.87	48.053	1.89	-0.03	1.89
7996.00	90.220	339.030	6533.65	1538.96	1670.70	1728.71	1763687.10	14555784.42	40°04'44.187"N	80°33'33.557"W	2404.10	45.978	0.92	-0.13	0.91
8089.00	90.150	339.810	6533.35	1628.20	1757.77	1696.02	1763654.42	14555871.45	40°04'45.049"N	80°33'33.972"W	2442.59	43.976	0.84	-0.08	0.84
8181.00	90.220	340.010	6533.06	1716.69	1844.17	1664.42	1763622.83	14555957.82	40°04'45.904"N	80°33'34.373"W	2484.20	42.067	0.23	0.08	0.22
8274.00	90.310	340.310	6532.63	1806.25	1931.65	1632.86	1763591.28	14556045.26	40°04'46.770"N	80°33'34.774"W	2529.32	40.208	0.34	0.10	0.32
8367.00	90.220	337.960	6532.20	1895.35	2018.54	1599.74	1763558.17	14556132.12	40°04'47.630"N	80°33'35.194"W	2575.59	38.398	2.53	-0.10	-2.53
8459.00	90.340	336.710	6531.75	1982.62	2103.43	1564.29	1763522.73	14556216.98	40°04'48.471"N	80°33'35.645"W	2621.34	36.638	1.36	0.13	-1.36
8552.00	90.310	335.200	6531.22	2070.10	2188.36	1526.39	1763484.86	14556301.88	40°04'49.312"N	80°33'36.127"W	2668.11	34.896	1.62	-0.03	-1.62
8645.00	90.400	336.920	6530.64	2157.64	2273.35	1488.66	1763447.14	14556386.84	40°04'50.154"N	80°33'36.607"W	2717.40	33.218	1.85	0.10	1.85
8738.00	90.550	341.740	6529.87	2246.81	2360.34	1455.84	1763414.33	14556473.79	40°04'51.015"N	80°33'37.024"W	2773.21	31.666	5.19	0.16	5.18
8830.00	90.680	340.990	6528.88	2335.91	2447.51	1426.45	1763384.95	14556560.93	40°04'51.878"N	80°33'37.396"W	2832.85	30.234	0.83	0.14	-0.82
8923.00	90.710	338.010	6527.76	2425.16	2534.60	1393.88	1763352.40	14556647.99	40°04'52.740"N	80°33'37.810"W	2892.60	28.808	3.20	0.03	-3.20
9016.00	90.580	338.790	6526.71	2513.91	2621.07	1359.65	1763318.18	14556734.42	40°04'53.596"N	80°33'38.245"W	2952.73	27.418	0.85	-0.14	0.84
9108.00	90.620	342.320	6525.74	2602.66	2707.80	1329.03	1763287.57	14556821.12	40°04'54.455"N	80°33'38.633"W	3016.37	26.143	3.84	0.04	3.84
9201.00	90.620	345.200	6524.74	2693.61	2797.08	1303.03	1763261.57	14556910.36	40°04'55.338"N	80°33'38.962"W	3085.69	24.979	3.10	0.00	3.10
9294.00	90.620	344.110	6523.73	2784.85	2886.75	1278.42	1763236.97	14557000.00	40°04'56.226"N	80°33'39.273"W	3157.17	23.886	1.17	0.00	-1.17
9386.00	90.680	340.670	6522.69	2874.33	2974.42	1250.59	1763209.16	14557087.64	40°04'57.094"N	80°33'39.625"W	3226.63	22.804	3.74	0.07	-3.74
9479.00	90.650	337.570	6521.61	2963.41	3061.30	1217.45	1763176.03	14557174.48	40°04'57.954"N	80°33'40.046"W	3294.50	21.687	3.33	-0.03	-3.33
9572.00	90.650	336.260	6520.55	3051.41	3146.84	1180.99	1763139.58	14557259.99	40°04'58.801"N	80°33'40.510"W	3361.15	20.571	1.41	0.00	-1.41
9665.00	90.650	337.940	6519.50	3139.50	3232.51	1144.80	1763103.41	14557345.62	40°04'59.649"N	80°33'40.970"W	3429.24	19.502	1.81	0.00	1.81
9757.00	90.650	340.050	6518.45	3227.57	3318.38	1111.83	1763070.45	14557431.46	40°05'00.499"N	80°33'41.388"W	3499.69	18.524	2.29	0.00	2.29
9850.00	90.620	340.630	6517.42	3317.61	3405.96	1080.54	1763039.18	14557519.00	40°05'01.366"N	80°33'41.785"W	3573.25	17.602	0.62	-0.03	0.62

05-26-2017

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #605
Area	Ohio County, WV	Well	GW Rentals LLC OHI 605H
Field	Ohio	Wellbore	GW Rentals LLC OHI 605H AWB
Facility	GW Rentals LLC OHI Pad		

WELLPATH DATA (173 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]
9943.00	90.550	340.580	6516.47	3406.96	3493.67	1049.66	1763008.31	14557606.69	40°05'02.235"N	80°33'42.177"W	3647.95	16.723	0.09	-0.08	-0.05
10036.00	90.650	339.100	6515.50	3496.38	3580.97	1017.61	1762976.27	14557693.95	40°05'03.099"N	80°33'42.584"W	3722.75	15.864	1.59	0.11	-1.59
10128.00	90.830	340.980	6514.31	3584.92	3667.43	986.21	1762944.88	14557780.38	40°05'03.955"N	80°33'42.982"W	3797.72	15.051	2.05	0.20	2.04
10221.00	90.710	344.090	6513.06	3675.42	3756.12	958.30	1762916.99	14557869.04	40°05'04.833"N	80°33'43.336"W	3876.44	14.313	3.35	-0.13	3.34
10314.00	90.650	342.730	6511.96	3766.26	3845.24	931.75	1762890.44	14557958.12	40°05'05.175"N	80°33'43.672"W	3956.52	13.621	1.46	-0.06	-1.46
10407.00	90.650	339.360	6510.90	3856.18	3933.18	901.55	1762860.25	14558046.03	40°05'06.585"N	80°33'44.055"W	4035.19	12.910	3.62	0.00	-3.62
10499.00	90.620	341.250	6509.88	3944.83	4019.79	870.55	1762829.26	14558132.60	40°05'07.443"N	80°33'44.448"W	4112.98	12.220	2.05	-0.03	2.05
10592.00	90.710	340.690	6508.80	4034.74	4107.70	840.23	1762798.95	14558220.48	40°05'08.313"N	80°33'44.833"W	4192.76	11.560	0.61	0.10	-0.60
10685.00	90.830	336.710	6507.55	4123.61	4194.33	806.46	1762765.19	14558307.07	40°05'09.170"N	80°33'45.262"W	4271.15	10.884	4.28	0.13	-4.28
10778.00	90.520	335.240	6506.46	4211.10	4279.26	768.60	1762727.35	14558391.97	40°05'10.012"N	80°33'45.743"W	4347.74	10.182	1.62	-0.33	-1.58
10870.00	90.710	337.060	6505.47	4297.74	4363.40	731.40	1762690.17	14558476.08	40°05'10.845"N	80°33'46.217"W	4424.27	9.516	1.99	0.21	1.98
10963.00	90.710	338.300	6504.32	4386.13	4449.42	696.08	1762654.87	14558562.07	40°05'11.697"N	80°33'46.666"W	4503.54	8.891	1.33	0.00	1.33
11056.00	90.580	338.640	6503.27	4474.92	4535.92	661.96	1762620.75	14558648.54	40°05'12.553"N	80°33'47.099"W	4583.97	8.303	0.39	-0.14	0.37
11148.00	90.550	338.070	6502.36	4562.69	4621.43	628.02	1762586.83	14558734.01	40°05'13.400"N	80°33'47.530"W	4663.91	7.739	0.62	-0.03	-0.62
11241.00	90.710	337.770	6501.34	4651.20	4707.61	593.07	1762551.89	14558820.15	40°05'14.253"N	80°33'47.975"W	4744.82	7.180	0.37	0.17	-0.32
11334.00	90.520	338.350	6500.34	4739.78	4793.87	558.32	1762517.16	14558906.38	40°05'15.107"N	80°33'48.416"W	4826.27	6.643	0.66	-0.20	0.62
11427.00	90.710	336.600	6499.34	4828.07	4879.76	522.70	1762481.55	14558992.24	40°05'15.958"N	80°33'48.869"W	4907.68	6.114	1.89	0.20	-1.88
11519.00	90.770	337.660	6498.16	4915.23	4964.52	486.95	1762445.81	14559076.97	40°05'16.797"N	80°33'49.324"W	4988.35	5.602	1.15	0.07	1.15
11612.00	90.680	340.880	6496.98	5004.38	5051.48	454.03	1762412.91	14559163.90	40°05'17.658"N	80°33'49.742"W	5071.85	5.136	3.46	-0.10	3.46
11705.00	90.740	341.560	6495.83	5094.38	5139.52	424.10	1762382.98	14559251.91	40°05'18.529"N	80°33'50.121"W	5156.99	4.717	0.73	0.06	0.73
11797.00	90.680	340.850	6494.69	5183.42	5226.61	394.46	1762353.36	14559338.96	40°05'19.391"N	80°33'50.497"W	5241.48	4.316	0.77	-0.07	-0.77
11890.00	90.830	342.180	6493.46	5273.54	5314.80	364.97	1762323.88	14559427.12	40°05'20.264"N	80°33'50.871"W	5327.32	3.928	1.44	0.16	1.43
11983.00	90.680	343.320	6492.24	5364.13	5403.61	337.40	1762296.32	14559515.89	40°05'21.143"N	80°33'51.220"W	5414.14	3.573	1.24	-0.16	1.23
12075.00	90.770	343.560	6491.07	5454.00	5491.79	311.18	1762270.11	14559604.03	40°05'22.016"N	80°33'51.552"W	5500.60	3.243	0.28	0.10	0.26
12168.00	90.430	345.540	6490.10	5545.21	5581.42	286.41	1762245.35	14559693.63	40°05'22.903"N	80°33'51.865"W	5588.76	2.938	2.16	-0.37	2.13
12261.00	90.490	339.810	6489.35	5635.75	5670.16	258.72	1762217.68	14559782.34	40°05'23.781"N	80°33'52.216"W	5676.06	2.613	6.16	0.06	-6.16
12354.00	90.370	336.250	6488.65	5724.30	5756.39	223.94	1762182.90	14559868.53	40°05'24.635"N	80°33'52.658"W	5760.74	2.228	3.83	-0.13	-3.83
12446.00	90.430	335.850	6488.01	5810.90	5840.47	186.59	1762145.57	14559952.58	40°05'25.468"N	80°33'53.133"W	5843.45	1.830	0.44	0.07	-0.43
12539.00	90.400	337.280	6487.34	5898.72	5925.79	149.61	1762108.60	14560037.87	40°05'26.313"N	80°33'53.604"W	5927.68	1.446	1.54	-0.03	1.54
12632.00	90.400	337.760	6486.69	5987.03	6011.72	114.05	1762073.06	14560123.77	40°05'27.164"N	80°33'54.056"W	6012.80	1.087	0.52	0.00	0.52

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Facility	GW Rentals LLC OHI Pad		

WELLPATH DATA (173 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]
12724.00	90.460	339.260	6486.00	6074.88	6097.32	80.35	1762039.37	14560209.33	40°05'28.01"N	80°33'54.484"W	6097.85	0.755	1.63	0.07	1.63
12817.00	90.370	338.480	6485.32	6163.85	6184.06	46.82	1762005.86	14560296.04	40°05'28.870"N	80°33'54.910"W	6184.24	0.434	0.84	-0.10	-0.84
12910.00	90.400	337.940	6484.70	6252.51	6270.42	12.30	1761971.35	14560382.36	40°05'29.725"N	80°33'55.349"W	6270.43	0.112	0.58	0.03	-0.58
13002.00	90.340	336.940	6484.10	6339.84	6355.37	-22.99	1761936.07	14560467.29	40°05'30.566"N	80°33'55.797"W	6355.42	359.793	1.09	-0.07	-1.09
13095.00	90.490	338.330	6483.43	6428.21	6441.37	-58.38	1761900.70	14560553.25	40°05'31.418"N	80°33'56.247"W	6441.64	359.481	1.50	0.16	1.49
13188.00	90.550	337.350	6482.59	6516.68	6527.50	-93.45	1761865.63	14560639.35	40°05'32.270"N	80°33'56.693"W	6528.17	359.180	1.06	0.06	-1.05
13281.00	90.250	337.460	6481.94	6604.94	6613.36	-129.19	1761829.91	14560725.17	40°05'33.121"N	80°33'57.147"W	6614.62	358.881	0.34	-0.32	0.12
13373.00	90.460	340.690	6481.37	6693.04	6699.28	-162.04	1761797.07	14560811.06	40°05'33.971"N	80°33'57.565"W	6701.24	358.614	3.52	0.23	3.51
13466.00	90.460	343.550	6480.62	6783.40	6787.78	-190.59	1761768.54	14560899.52	40°05'34.847"N	80°33'57.927"W	6790.45	358.392	3.08	0.00	3.08
13559.00	90.430	342.080	6479.90	6874.02	6876.62	-218.06	1761741.07	14560988.33	40°05'35.726"N	80°33'58.275"W	6880.08	358.184	1.58	-0.03	-1.58
13651.00	90.550	341.740	6479.11	6963.34	6964.07	-246.63	1761712.52	14561075.75	40°05'36.592"N	80°33'58.637"W	6968.43	357.972	0.39	0.13	-0.37
13744.00	90.580	342.250	6478.19	7053.65	7052.51	-275.37	1761683.78	14561164.15	40°05'37.467"N	80°33'59.001"W	7057.88	357.764	0.55	0.03	0.55
13837.00	90.430	340.080	6477.37	7143.63	7140.52	-305.40	1761653.77	14561252.13	40°05'38.339"N	80°33'59.382"W	7147.05	357.551	2.34	-0.16	-2.33
13930.00	90.370	338.130	6476.72	7232.72	7227.40	-338.56	1761620.62	14561338.97	40°05'39.199"N	80°33'59.803"W	7235.32	357.318	2.10	-0.06	-2.10
14022.00	90.400	337.430	6476.11	7320.21	7312.56	-373.35	1761585.84	14561424.11	40°05'40.042"N	80°34'00.245"W	7322.09	357.077	0.76	0.03	-0.76
14115.00	90.150	339.100	6475.66	7408.90	7398.95	-407.79	1761551.42	14561510.46	40°05'40.897"N	80°34'00.683"W	7410.18	356.845	1.82	-0.27	1.80
14208.00	90.460	337.580	6475.16	7497.62	7485.38	-442.11	1761517.11	14561596.85	40°05'41.753"N	80°34'01.119"W	7498.42	356.620	1.67	0.33	-1.63
14300.00	90.340	335.980	6474.52	7584.60	7569.92	-478.38	1761480.85	14561681.36	40°05'42.590"N	80°34'01.581"W	7585.02	356.384	1.74	-0.13	-1.74
14393.00	90.460	336.120	6473.87	7672.14	7654.91	-516.14	1761443.11	14561766.32	40°05'43.432"N	80°34'02.061"W	7672.29	356.143	0.20	0.13	0.15
14487.00	90.550	342.670	6473.04	7762.27	7742.85	-549.20	1761410.06	14561854.22	40°05'44.303"N	80°34'02.481"W	7762.30	355.943	6.97	0.10	6.97
14578.00	90.490	343.810	6472.22	7851.09	7829.98	-575.44	1761383.83	14561941.32	40°05'45.165"N	80°34'02.813"W	7851.09	355.797	1.25	-0.07	1.25
14611.00	90.430	343.530	6471.95	7883.36	7861.64	-584.72	1761374.56	14561972.98	40°05'45.478"N	80°34'02.931"W	7883.36	355.746	0.87	-0.18	-0.85
14634.00	90.430	343.530	6471.78	7905.83	7883.70	-591.24	1761368.04	14561995.02	40°05'45.696"N	80°34'03.013"W	7905.84	355.711	0.00	0.00	0.00

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Actual Wellpath Report

GW Rentals LLC OHI 605H AWP Proj: 14634'
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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #605
SOUTHWESTERN ENERGY	Well	GW Rentals LLC OHI 605H
Area Ohio County, WV	Wellbore	GW Rentals LLC OHI 605H AWB
Field Ohio		
Facility GW Rentals LLC OHI Pad		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
GW Rentals LLC OHI 605H BHL Rev-1		6438.00	7883.85	-581.30	1761377.97	14561995.17	40°05'45.697"N	80°34'02.885"W	point
GW Rentals LLC OHI 605H LP Rev-1		6535.00	1106.83	1939.79	1763898.09	14555220.76	40°04'38.604"N	80°33'30.878"W	point

WELLPATH COMPOSITION - Ref Wellbore: GW Rentals LLC OHI 605H AWB Ref Wellpath: GW Rentals LLC OHI 605H AWP Proj: 14634'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	578.00	EMS (Standard)	01_EMS <17-1/2"> (208'-578')	GW Rentals LLC OHI 605H AWB
578.00	2067.00	NaviTrak (MagCorr)	02_APS EM <12-1/4"> (578')(705'-2067')	GW Rentals LLC OHI 605H AWB
2067.00	5617.00	NaviTrak (MagCorr)	03_APS EM <8-3/4"> (2067')(2151'-5617')	GW Rentals LLC OHI 605H AWB
5617.00	14611.00	NaviTrak (MagCorr)	04_BHI AT Curve <8-1/2"> (5617')(5679'-14611')	GW Rentals LLC OHI 605H AWB
14611.00	14634.00	Blind Drilling (std)	Projection to bit	GW Rentals LLC OHI 605H AWB



Actual Wellpath Report
 GW Rentals LLC OHI 605H AWP Proj: 14634'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #605
Area	Ohio County, WV	Well	GW Rentals LLC OHI 605H
Field	Ohio	Wellbore	GW Rentals LLC OHI 605H AWB
Facility	GW Rentals LLC OHI Pad		

COMMENTS

Wellpath general comments
 API: 47-069-00201-0000
 BHI Job #: 7663936
 Rig: SDC 41
 Duration: 12/18/2015-12/22/2015
 EMS <17-1/2"> (208'-578')
 APS EM <12-1/4"> (578')(705'-2067')
 APS EM <8-3/4"> (2067')(2151'-5617')
 BHI AT Curve <8-1/2"> (5617')(5679'-14611')
 Projected MD at TD: 14634'

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