

069-00071

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CHESAPEAKE APPALACHIA, LLC

Location: Ohio County, WV
Field: Ohio
Facility: Brian Dytko

Slot: Slot 8
Well: Brian Dytko 8H
Wellbore: Brian Dytko 8H (PWB)



Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	10212.00	89.700	149.500	6393.61	-3578.12	2039.23	0.00	4118.38
End of 3D Arc	10237.04	89.670	150.000	6393.75	-3599.75	2051.84	2.00	4143.42
End of Tangent	14191.94	89.670	150.000	6416.53	-7024.74	4029.26	0.00	8098.25

Location Information

Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Brian Dytko		1689678.500	559144.317	40°01'47.600"N	80°36'29.400"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot 8	0.00	0.00	1689678.500	559144.317	40°01'47.600"N	80°36'29.400"W
Nomac 243 (RT) to Mud line (At Slot: Slot 8)				20ft		
Mean Sea Level to Mud line (At Slot: Slot 8)				-1245ft		
Nomac 243 (RT) to Mean Sea Level				1265ft		

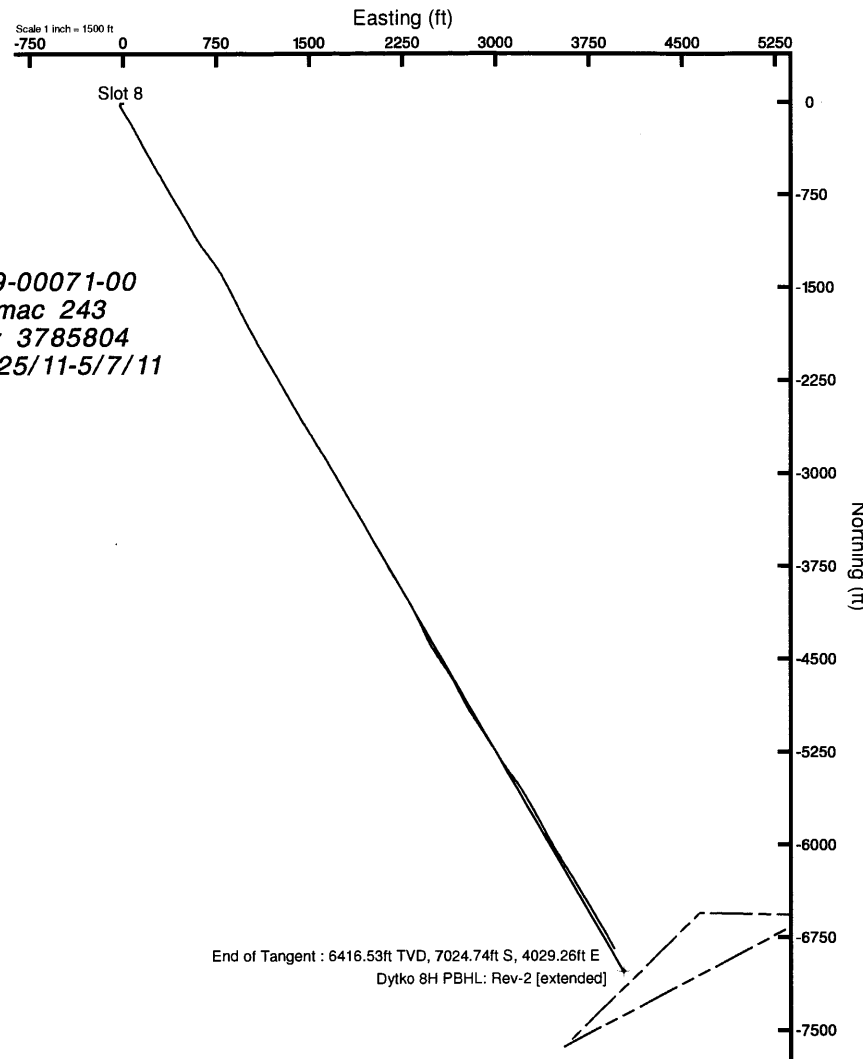
Tie-On Position

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
10212.00	89.700	149.500	6393.61	-3578.12	2039.23	1691717.65	555566.33	40°01'12.490"N	80°36'02.624"W

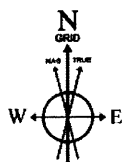
Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Dytko 8H LP: Rev-2		6307.99	-466.17	230.33	1689908.82	558678.16	40°01'43.022"N	80°36'26.365"W
Dytko 8H PBHL: Boundary		6416.00	-7639.42	3551.67	1693230.04	551505.18	40°00'32.540"N	80°35'42.550"W
Dytko 8H PBHL: Rev-2 [extended]		6416.00	-7024.74	4029.26	1693707.61	552119.83	40°00'38.671"N	80°35'35.509"W
Dytko 8H PBHL: plat 5.6.11		6416.00	-6682.75	4438.77	1694117.11	552481.81	40°00'42.100"N	80°35'31.300"W
Dytko 8H PBHL: Rev-1		6416.80	-5636.01	3245.37	1692923.76	553508.51	40°00'52.300"N	80°35'46.800"W

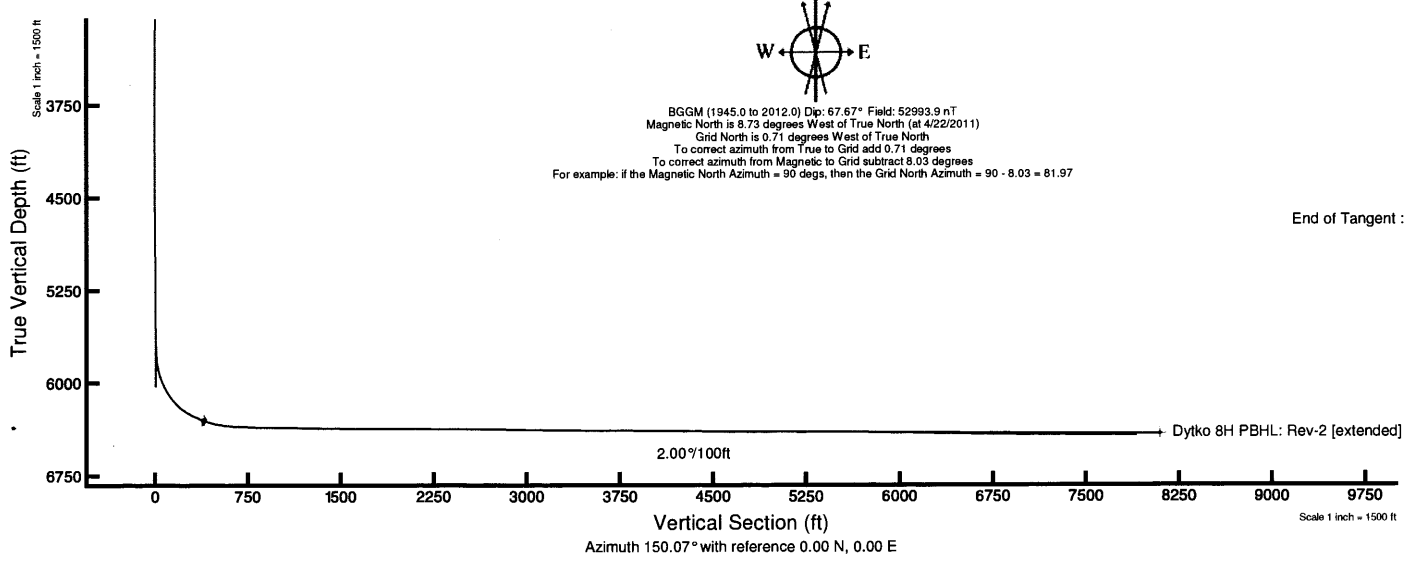
Plot reference wellpath is Rev-C.0	
True vertical depths are referenced to Nomac 243 (RT)	Grid System: NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet
Measured depths are referenced to Nomac 243 (RT)	North Reference: Grid north
Nomac 243 (RT) to Mean Sea Level: 1265 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot 8): -1245 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: always on 5/9/2011



API:47-069-00071-00
Rig: Nomac 243
BHI Job#: 3785804
Duration: 4/25/11-5/7/11



BGGM (1945.0 to 2012.0) Dip: 67.67° Field: 52993.9 nT
 Magnetic North is 8.73 degrees West of True North (at 4/22/2011)
 Grid North is 0.71 degrees West of True North
 To correct azimuth from True to Grid add 0.71 degrees
 To correct azimuth from Magnetic to Grid subtract 8.03 degrees
 For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 - 8.03 = 81.97





Actual Wellpath Report

BHI NaviTrak MWD Surveys (5600') (5655'-13959') Proj:14000'
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REFERENCE WELLPATH IDENTIFICATION

Operator	CHESAPEAKE APPALACHIA, LLC	Slot	Slot 8
Area	Ohio County, WV	Well	Brian Dytko 8H
Field	Ohio	Wellbore	Brian Dytko 8H (AWB)
Facility	Brian Dytko		

REPORT SETUP INFORMATION

Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Alvayes
Scale	0.999966	Report Generated	5/27/2011 at 6:30:17 PM
Convergence at slot	0.71° West	Database/Source file	WA_EasternUS/Brian_Dytko_8H_AWB_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	1689678.50	559144.32	40°01'47.600"N	80°36'29.400"W
Facility Reference Pt			1689678.50	559144.32	40°01'47.600"N	80°36'29.400"W
Field Reference Pt			0.00	0.00	38°17'12.460"N	86°28'23.077"W

WELLPATH DATUM

Calculation method	Minimum curvature	Nomac 243 (RT) to Facility Vertical Datum	20.00ft
Horizontal Reference Pt	Slot	Nomac 243 (RT) to Mean Sea Level	1265.00ft
Vertical Reference Pt	Nomac 243 (RT)	Nomac 243 (RT) to Mud Line at Slot (Slot 8)	20.00ft
MD Reference Pt	Nomac 243 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	150.07°



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Area	Ohio County, WV	Well	Brian Dytko 8H
Field	Ohio	Wellbore	Brian Dytko 8H (AWB)
Facility	Brian Dytko		

WELLPATH DATA (169 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]
0.00	0.000	146.930	0.00	0.00	0.00	0.00	1689678.50	559144.32	40°01'47.600"N	80°36'29.400"W	0.00	0.000	0.00
100.00	0.160	146.930	100.00	0.14	-0.12	0.08	1689678.58	559144.20	40°01'47.599"N	80°36'29.399"W	0.14	146.930	0.16
200.00	0.520	195.510	200.00	0.60	-0.67	0.03	1689678.53	559143.65	40°01'47.593"N	80°36'29.399"W	0.67	177.353	0.43
300.00	0.150	125.680	300.00	1.03	-1.18	0.02	1689678.52	559143.13	40°01'47.588"N	80°36'29.400"W	1.18	179.225	0.49
400.00	0.230	191.720	400.00	1.30	-1.46	0.08	1689678.58	559142.86	40°01'47.586"N	80°36'29.399"W	1.46	176.797	0.22
500.00	0.090	2.510	500.00	1.39	-1.58	0.04	1689678.54	559142.74	40°01'47.584"N	80°36'29.399"W	1.58	178.392	0.32
600.00	0.120	350.770	600.00	1.22	-1.39	0.03	1689678.53	559142.92	40°01'47.586"N	80°36'29.399"W	1.39	178.731	0.04
700.00	0.130	305.490	700.00	1.02	-1.22	-0.08	1689678.42	559143.09	40°01'47.588"N	80°36'29.401"W	1.23	183.657	0.10
800.00	0.190	174.480	800.00	1.07	-1.32	-0.15	1689678.35	559142.99	40°01'47.587"N	80°36'29.402"W	1.33	186.665	0.29
900.00	0.130	212.960	899.99	1.27	-1.58	-0.20	1689678.30	559142.73	40°01'47.584"N	80°36'29.402"W	1.60	187.212	0.12
1000.00	0.190	288.980	999.99	1.20	-1.63	-0.42	1689678.08	559142.69	40°01'47.584"N	80°36'29.405"W	1.68	194.454	0.20
1100.00	0.240	318.400	1099.99	0.87	-1.41	-0.71	1689677.78	559142.90	40°01'47.586"N	80°36'29.409"W	1.59	206.804	0.12
1200.00	0.140	238.710	1199.99	0.67	-1.32	-0.96	1689677.54	559143.00	40°01'47.587"N	80°36'29.412"W	1.63	215.943	0.26
1300.00	0.070	239.230	1299.99	0.67	-1.42	-1.12	1689677.38	559142.90	40°01'47.586"N	80°36'29.414"W	1.80	218.214	0.07
1400.00	0.270	342.540	1399.99	0.44	-1.22	-1.24	1689677.26	559143.09	40°01'47.588"N	80°36'29.416"W	1.74	225.360	0.29
1500.00	0.190	270.670	1499.99	0.13	-1.00	-1.47	1689677.02	559143.32	40°01'47.590"N	80°36'29.419"W	1.78	235.962	0.28
1600.00	0.140	201.120	1599.99	0.12	-1.11	-1.68	1689676.82	559143.21	40°01'47.589"N	80°36'29.421"W	2.02	236.662	0.19
1700.00	0.100	153.180	1699.99	0.28	-1.30	-1.69	1689676.81	559143.02	40°01'47.587"N	80°36'29.422"W	2.13	232.418	0.10
1800.00	0.180	226.710	1799.99	0.41	-1.49	-1.76	1689676.74	559142.83	40°01'47.585"N	80°36'29.422"W	2.31	229.900	0.18
1900.00	0.090	328.180	1899.99	0.37	-1.53	-1.92	1689676.58	559142.79	40°01'47.585"N	80°36'29.424"W	2.45	231.511	0.22
2000.00	0.250	265.010	1999.99	0.19	-1.48	-2.18	1689676.32	559142.84	40°01'47.585"N	80°36'29.428"W	2.63	235.833	0.22
2100.00	0.390	281.640	2099.99	-0.12	-1.43	-2.73	1689675.77	559142.89	40°01'47.586"N	80°36'29.435"W	3.08	242.363	0.17
2200.00	0.290	283.960	2199.99	-0.52	-1.30	-3.31	1689675.19	559143.02	40°01'47.587"N	80°36'29.442"W	3.55	248.556	0.10
2300.00	0.440	279.900	2299.99	-0.95	-1.17	-3.93	1689674.57	559143.14	40°01'47.588"N	80°36'29.450"W	4.10	253.398	0.15
2400.00	0.610	258.600	2399.98	-1.36	-1.21	-4.83	1689673.67	559143.11	40°01'47.587"N	80°36'29.462"W	4.98	255.924	0.26
2500.00	0.560	248.560	2499.98	-1.60	-1.50	-5.81	1689672.69	559142.82	40°01'47.585"N	80°36'29.474"W	6.00	255.563	0.11
2600.00	0.430	250.180	2599.97	-1.74	-1.80	-6.62	1689671.88	559142.52	40°01'47.581"N	80°36'29.485"W	6.86	254.771	0.13
2700.00	0.370	259.660	2699.97	-1.91	-1.99	-7.29	1689671.21	559142.33	40°01'47.579"N	80°36'29.493"W	7.55	254.752	0.09
2800.00	0.480	254.800	2799.97	-2.13	-2.15	-8.01	1689670.49	559142.16	40°01'47.578"N	80°36'29.503"W	8.29	254.946	0.12
2900.00	0.630	260.580	2899.96	-2.43	-2.35	-8.96	1689669.54	559141.96	40°01'47.576"N	80°36'29.515"W	9.26	255.273	0.16



Actual Wellpath Report

BHI NaviTrak MWD Surveys (5600') (5655'-13959') Proj:14000'
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Area	Ohio County, WV	Well	Brian Dytko 8H
Field	Ohio	Wellbore	Brian Dytko 8H (AWB)
Facility	Brian Dytko		

WELLPATH DATA (169 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]
3000.00	0.570	277.370	2999.96	-2.92	-2.38	-9.99	1689668.51	559141.94	40°01'47.575"N	80°36'29.528"W	10.27	256.600	0.18
3100.00	0.590	287.880	3099.95	-3.61	-2.16	-10.97	1689667.53	559142.16	40°01'47.577"N	80°36'29.541"W	11.19	258.874	0.11
3200.00	0.550	280.760	3199.95	-4.30	-1.91	-11.94	1689666.56	559142.41	40°01'47.580"N	80°36'29.553"W	12.09	260.906	0.08
3300.00	0.620	271.850	3299.94	-4.90	-1.80	-12.95	1689665.55	559142.51	40°01'47.581"N	80°36'29.566"W	13.07	262.070	0.11
3400.00	0.450	256.290	3399.94	-5.29	-1.88	-13.87	1689664.63	559142.44	40°01'47.580"N	80°36'29.578"W	14.00	262.285	0.22
3500.00	0.620	276.930	3499.93	-5.73	-1.91	-14.79	1689663.71	559142.41	40°01'47.579"N	80°36'29.590"W	14.91	262.653	0.25
3600.00	0.810	265.880	3599.93	-6.36	-1.89	-16.03	1689662.47	559142.42	40°01'47.579"N	80°36'29.606"W	16.14	263.267	0.23
3700.00	0.530	247.770	3699.92	-6.73	-2.12	-17.16	1689661.34	559142.20	40°01'47.577"N	80°36'29.620"W	17.30	262.965	0.35
3800.00	0.470	262.200	3799.91	-6.94	-2.35	-18.00	1689660.50	559141.97	40°01'47.575"N	80°36'29.631"W	18.15	262.565	0.14
3900.00	0.520	242.270	3899.91	-7.12	-2.62	-18.81	1689659.69	559141.70	40°01'47.572"N	80°36'29.641"W	18.99	262.082	0.18
4000.00	0.550	230.760	3999.91	-7.06	-3.13	-19.58	1689658.92	559141.19	40°01'47.567"N	80°36'29.651"W	19.83	260.917	0.11
4100.00	0.540	202.990	4099.90	-6.69	-3.87	-20.14	1689658.36	559140.45	40°01'47.559"N	80°36'29.658"W	20.50	259.127	0.26
4200.00	0.570	207.740	4199.90	-6.14	-4.74	-20.55	1689657.95	559139.58	40°01'47.551"N	80°36'29.663"W	21.09	257.008	0.05
4300.00	0.740	211.690	4299.89	-5.57	-5.73	-21.12	1689657.38	559138.59	40°01'47.541"N	80°36'29.671"W	21.89	254.818	0.18
4400.00	0.570	207.400	4399.88	-5.00	-6.72	-21.69	1689656.81	559137.59	40°01'47.531"N	80°36'29.678"W	22.71	252.780	0.18
4500.00	0.670	210.730	4499.88	-4.44	-7.67	-22.22	1689656.28	559136.65	40°01'47.522"N	80°36'29.684"W	23.50	250.962	0.11
4600.00	0.550	219.500	4599.87	-3.99	-8.54	-22.82	1689655.68	559135.78	40°01'47.513"N	80°36'29.692"W	24.37	249.485	0.15
4700.00	0.750	210.270	4699.87	-3.49	-9.48	-23.46	1689655.04	559134.84	40°01'47.504"N	80°36'29.700"W	25.30	248.005	0.23
4800.00	0.740	206.290	4799.86	-2.81	-10.62	-24.07	1689654.43	559133.70	40°01'47.492"N	80°36'29.708"W	26.31	246.196	0.05
4900.00	0.710	195.800	4899.85	-2.02	-11.79	-24.53	1689653.97	559132.52	40°01'47.480"N	80°36'29.713"W	27.22	244.319	0.14
5000.00	0.530	204.980	4999.84	-1.32	-12.81	-24.89	1689653.61	559131.51	40°01'47.470"N	80°36'29.718"W	28.00	242.769	0.21
5100.00	0.550	204.300	5099.84	-0.77	-13.67	-25.29	1689653.22	559130.65	40°01'47.462"N	80°36'29.723"W	28.74	241.609	0.02
5200.00	0.450	215.340	5199.84	-0.33	-14.42	-25.71	1689652.79	559129.89	40°01'47.454"N	80°36'29.728"W	29.48	240.705	0.14
5300.00	0.430	212.500	5299.83	0.01	-15.06	-26.14	1689652.36	559129.26	40°01'47.448"N	80°36'29.734"W	30.17	240.049	0.03
5400.00	0.520	211.380	5399.83	0.40	-15.77	-26.58	1689651.92	559128.55	40°01'47.441"N	80°36'29.739"W	30.90	239.324	0.09
5500.00	0.500	213.140	5499.83	0.82	-16.52	-27.05	1689651.45	559127.80	40°01'47.433"N	80°36'29.745"W	31.70	238.591	0.03
5600.00	0.490	197.960	5599.82	1.30	-17.29	-27.42	1689651.08	559127.03	40°01'47.426"N	80°36'29.750"W	32.42	237.768	0.13
5655.00	3.200	158.600	5654.79	2.98	-18.94	-26.93	1689651.57	559125.37	40°01'47.410"N	80°36'29.743"W	32.93	234.880	5.16
5698.00	3.400	160.800	5697.72	5.42	-21.27	-26.08	1689652.42	559123.05	40°01'47.387"N	80°36'29.732"W	33.65	230.804	0.55
5741.00	3.000	160.300	5740.65	7.78	-23.53	-25.28	1689653.22	559120.79	40°01'47.364"N	80°36'29.721"W	34.53	227.053	0.93



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WELLPATH DATA (169 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]
5785.00	3.200	158.800	5784.59	10.13	-25.76	-24.45	1689654.05	559118.56	40°01'47.342"N	80°36'29.710"W	35.51	223.504	0.49
5828.00	6.000	149.500	5827.44	13.56	-28.81	-22.87	1689655.63	559115.50	40°01'47.312"N	80°36'29.689"W	36.79	218.441	6.72
5872.00	10.200	147.100	5871.00	19.75	-34.07	-19.59	1689658.91	559110.25	40°01'47.261"N	80°36'29.646"W	39.30	209.895	9.57
5915.00	14.300	148.800	5913.01	28.87	-41.81	-14.77	1689663.74	559102.51	40°01'47.185"N	80°36'29.583"W	44.34	199.450	9.57
5958.00	18.100	152.000	5954.29	40.86	-52.25	-8.88	1689669.62	559092.06	40°01'47.083"N	80°36'29.506"W	53.00	189.640	9.07
6002.00	21.900	148.600	5995.63	55.90	-65.30	-1.39	1689677.11	559079.02	40°01'46.955"N	80°36'29.408"W	65.31	181.219	9.03
6045.00	25.700	150.200	6034.97	73.24	-80.24	7.43	1689685.93	559064.08	40°01'46.808"N	80°36'29.292"W	80.58	174.713	8.96
6088.00	29.800	148.200	6073.02	93.26	-97.42	17.69	1689696.19	559046.90	40°01'46.639"N	80°36'29.157"W	99.01	169.705	9.78
6132.00	34.500	147.400	6110.26	116.64	-117.22	30.18	1689708.68	559027.10	40°01'46.445"N	80°36'28.994"W	121.04	165.564	10.73
6175.00	39.500	148.100	6144.59	142.49	-139.10	43.97	1689722.47	559005.22	40°01'46.231"N	80°36'28.813"W	145.89	162.457	11.67
6221.00	44.900	149.400	6178.66	173.37	-165.52	59.98	1689738.48	558978.80	40°01'45.972"N	80°36'28.603"W	176.05	160.080	11.89
6264.00	50.400	151.300	6207.61	205.13	-193.14	75.67	1689754.17	558951.19	40°01'45.701"N	80°36'28.397"W	207.43	158.604	13.20
6308.00	56.300	151.700	6233.87	240.41	-224.15	92.51	1689771.00	558920.18	40°01'45.396"N	80°36'28.175"W	242.49	157.574	13.43
6351.00	61.200	151.400	6256.17	277.15	-256.46	110.02	1689788.51	558887.87	40°01'45.079"N	80°36'27.945"W	279.06	156.781	11.41
6394.00	64.400	152.200	6275.82	315.37	-290.16	128.08	1689806.58	558854.17	40°01'44.748"N	80°36'27.708"W	317.17	156.182	7.62
6438.00	66.900	152.600	6293.96	355.42	-325.68	146.65	1689825.15	558818.65	40°01'44.400"N	80°36'27.463"W	357.18	155.758	5.74
6481.00	69.400	151.800	6309.96	395.30	-360.98	165.27	1689843.76	558783.35	40°01'44.053"N	80°36'27.218"W	397.02	155.401	6.06
6524.00	73.100	150.700	6323.78	436.00	-396.67	184.85	1689863.34	558747.66	40°01'43.703"N	80°36'26.961"W	437.63	155.014	8.94
6568.00	77.400	150.400	6334.98	478.54	-433.71	205.77	1689884.26	558710.62	40°01'43.339"N	80°36'26.686"W	480.05	154.619	9.79
6611.00	80.700	150.800	6343.15	520.75	-470.49	226.49	1689904.98	558673.84	40°01'42.978"N	80°36'26.414"W	522.17	154.294	7.73
6655.00	83.200	150.100	6349.31	564.31	-508.39	247.97	1689926.46	558635.95	40°01'42.607"N	80°36'26.132"W	565.64	153.998	5.90
6698.00	85.600	149.000	6353.51	607.10	-545.27	269.66	1689948.15	558599.06	40°01'42.245"N	80°36'25.847"W	608.31	153.686	6.13
6741.00	87.400	149.500	6356.13	650.01	-582.16	291.60	1689970.09	558562.18	40°01'41.883"N	80°36'25.560"W	651.11	153.394	4.34
6785.00	88.200	150.800	6357.82	693.98	-620.29	313.49	1689991.98	558524.05	40°01'41.509"N	80°36'25.272"W	695.01	153.189	3.47
6828.00	87.000	149.900	6359.62	736.94	-657.63	334.74	1690013.23	558486.71	40°01'41.142"N	80°36'24.993"W	737.92	153.023	3.49
6914.00	89.200	149.900	6362.47	822.89	-731.98	377.84	1690056.33	558412.36	40°01'40.413"N	80°36'24.427"W	823.75	152.698	2.56
7001.00	89.100	149.900	6363.76	909.88	-807.24	421.47	1690099.95	558337.10	40°01'39.674"N	80°36'23.855"W	910.65	152.431	0.11
7088.00	89.200	149.200	6365.05	996.86	-882.24	465.56	1690144.04	558262.11	40°01'38.939"N	80°36'23.276"W	997.54	152.179	0.81
7175.00	89.200	149.200	6366.27	1083.84	-956.96	510.10	1690188.58	558187.39	40°01'38.206"N	80°36'22.692"W	1084.42	151.941	0.00
7262.00	89.100	150.000	6367.56	1170.83	-1031.99	554.12	1690232.60	558112.37	40°01'37.470"N	80°36'22.114"W	1171.34	151.767	0.93



Actual Wellpath Report

BHI NaviTrak MWD Surveys (5600') (5655'-13959') Proj:14000'
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REFERENCE WELLPATH IDENTIFICATION

Operator	CHESAPEAKE APPALACHIA, LLC	Slot	Slot 8
Area	Ohio County, WV	Well	Brian Dytko 8H
Field	Ohio	Wellbore	Brian Dytko 8H (AWB)
Facility	Brian Dytko		

WELLPATH DATA (169 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]
7349.00	89.100	150.000	6368.93	1257.82	-1107.32	597.61	1690276.09	558037.03	40°01'36.731"N	80°36'21.543"W	1258.29	151.645	0.00
7435.00	89.200	143.900	6370.20	1343.64	-1179.37	644.49	1690322.96	557964.99	40°01'36.024"N	80°36'20.929"W	1343.97	151.345	7.09
7522.00	89.100	141.700	6371.49	1429.93	-1248.65	697.08	1690375.55	557895.71	40°01'35.346"N	80°36'20.242"W	1430.05	150.827	2.53
7609.00	89.400	146.200	6372.63	1516.40	-1318.97	748.26	1690426.73	557825.40	40°01'34.657"N	80°36'19.573"W	1516.43	150.433	5.18
7696.00	89.700	150.500	6373.32	1603.34	-1393.01	793.90	1690472.37	557751.36	40°01'33.931"N	80°36'18.975"W	1603.36	150.320	4.95
7783.00	89.700	152.300	6373.77	1690.31	-1469.39	835.54	1690514.01	557674.98	40°01'33.182"N	80°36'18.428"W	1690.34	150.376	2.07
7869.00	89.700	153.300	6374.22	1776.21	-1545.88	874.85	1690553.32	557598.50	40°01'32.431"N	80°36'17.910"W	1776.26	150.493	1.16
7956.00	89.700	153.800	6374.68	1863.05	-1623.77	913.60	1690592.07	557520.61	40°01'31.666"N	80°36'17.400"W	1863.14	150.636	0.57
8043.00	89.700	153.800	6375.13	1949.86	-1701.83	952.01	1690630.48	557442.55	40°01'30.899"N	80°36'16.894"W	1950.01	150.777	0.00
8130.00	89.600	151.700	6375.67	2036.76	-1779.17	991.85	1690670.31	557365.21	40°01'30.140"N	80°36'16.370"W	2036.96	150.861	2.42
8216.00	89.500	151.200	6376.34	2122.74	-1854.71	1032.95	1690711.41	557289.68	40°01'29.398"N	80°36'15.829"W	2122.95	150.885	0.59
8303.00	89.600	151.200	6377.02	2209.72	-1930.94	1074.86	1690753.32	557213.44	40°01'28.650"N	80°36'15.279"W	2209.95	150.898	0.11
8390.00	89.700	150.200	6377.56	2296.71	-2006.81	1117.43	1690795.89	557137.58	40°01'27.905"N	80°36'14.720"W	2296.94	150.890	1.16
8477.00	89.600	150.500	6378.09	2383.70	-2082.42	1160.47	1690838.93	557061.97	40°01'27.163"N	80°36'14.154"W	2383.94	150.870	0.36
8564.00	89.700	149.400	6378.62	2470.70	-2157.72	1204.03	1690882.49	556986.67	40°01'26.425"N	80°36'13.583"W	2470.92	150.838	1.27
8651.00	89.600	149.500	6379.15	2557.69	-2232.64	1248.25	1690926.71	556911.75	40°01'25.690"N	80°36'13.002"W	2557.90	150.791	0.16
8737.00	89.600	150.700	6379.75	2643.69	-2307.19	1291.12	1690969.58	556837.21	40°01'24.958"N	80°36'12.440"W	2643.89	150.768	1.40
8824.00	89.100	150.400	6380.74	2730.68	-2382.95	1333.89	1691012.35	556761.46	40°01'24.215"N	80°36'11.878"W	2730.88	150.761	0.67
8911.00	89.200	150.100	6382.03	2817.67	-2458.47	1377.06	1691055.51	556685.93	40°01'23.474"N	80°36'11.311"W	2817.87	150.746	0.36
8998.00	89.100	149.700	6383.32	2904.66	-2533.73	1420.69	1691099.13	556610.68	40°01'22.735"N	80°36'10.739"W	2904.85	150.720	0.47
9084.00	89.000	148.000	6384.74	2990.63	-2607.32	1465.17	1691143.61	556537.09	40°01'22.013"N	80°36'10.155"W	2990.79	150.666	1.98
9172.00	89.100	148.700	6386.20	3078.58	-2682.22	1511.33	1691189.78	556462.20	40°01'21.279"N	80°36'09.550"W	3078.71	150.600	0.80
9258.00	89.100	148.400	6387.55	3164.53	-2755.58	1556.20	1691234.64	556388.84	40°01'20.559"N	80°36'08.962"W	3164.64	150.545	0.35
9345.00	89.600	147.300	6388.54	3251.46	-2829.23	1602.49	1691280.93	556315.19	40°01'19.837"N	80°36'08.355"W	3251.54	150.473	1.39
9432.00	89.600	149.600	6389.15	3338.42	-2903.36	1648.01	1691326.45	556241.06	40°01'19.110"N	80°36'07.759"W	3338.48	150.420	2.64
9519.00	89.700	150.300	6389.68	3425.42	-2978.67	1691.57	1691370.01	556165.76	40°01'18.371"N	80°36'07.187"W	3425.48	150.408	0.81
9605.00	89.600	150.300	6390.21	3511.41	-3053.37	1734.18	1691412.62	556091.06	40°01'17.638"N	80°36'06.628"W	3511.47	150.405	0.12
9692.00	89.700	150.500	6390.74	3598.41	-3129.01	1777.16	1691455.59	556015.42	40°01'16.896"N	80°36'06.063"W	3598.47	150.405	0.26
9779.00	89.700	149.200	6391.19	3685.41	-3204.24	1820.85	1691499.28	555940.19	40°01'16.158"N	80°36'05.490"W	3685.47	150.392	1.49
9865.00	89.700	149.000	6391.64	3771.39	-3278.03	1865.02	1691543.45	555866.40	40°01'15.434"N	80°36'04.911"W	3771.44	150.363	0.23



Actual Wellpath Report

BHI NaviTrak MWD Surveys (5600') (5655'-13959') Proj:14000'
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REFERENCE WELLPATH IDENTIFICATION

Operator	CHESAPEAKE APPALACHIA, LLC	Slot	Slot 8
Area	Ohio County, WV	Well	Brian Dytko 8H
Field	Ohio	Wellbore	Brian Dytko 8H (AWB)
Facility	Brian Dytko		

WELLPATH DATA (169 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]
9952.00	89.600	149.800	6392.17	3858.39	-3352.92	1909.30	1691587.73	555791.52	40°01'14.699"N	80°36'04.330"W	3858.43	150.341	0.93
10039.00	89.700	150.400	6392.71	3945.38	-3428.33	1952.67	1691631.10	555716.11	40°01'13.959"N	80°36'03.760"W	3945.43	150.336	0.70
10126.00	89.700	150.000	6393.16	4032.38	-3503.83	1995.90	1691674.33	555640.62	40°01'13.219"N	80°36'03.193"W	4032.42	150.333	0.46
10212.00	89.700	149.500	6393.61	4118.38	-3578.12	2039.23	1691717.65	555566.33	40°01'12.490"N	80°36'02.624"W	4118.42	150.320	0.58
10299.00	89.400	150.400	6394.29	4205.38	-3653.42	2082.79	1691761.22	555491.03	40°01'11.751"N	80°36'02.053"W	4205.41	150.313	1.09
10386.00	89.200	150.800	6395.36	4292.36	-3729.21	2125.50	1691803.92	555415.24	40°01'11.007"N	80°36'01.492"W	4292.41	150.319	0.51
10473.00	89.200	149.600	6396.57	4379.35	-3804.70	2168.73	1691847.15	555339.76	40°01'10.266"N	80°36'00.924"W	4379.39	150.316	1.38
10559.00	89.100	150.000	6397.85	4465.34	-3879.02	2211.98	1691890.40	555265.44	40°01'09.537"N	80°36'00.357"W	4465.38	150.306	0.48
10646.00	89.200	148.800	6399.14	4552.33	-3953.89	2256.26	1691934.68	555190.57	40°01'08.803"N	80°35'59.776"W	4552.36	150.289	1.38
10733.00	89.200	148.300	6400.35	4639.29	-4028.10	2301.65	1691980.07	555116.36	40°01'08.075"N	80°35'59.181"W	4639.31	150.256	0.57
10820.00	90.500	153.400	6400.58	4726.25	-4104.06	2344.01	1692022.43	555040.41	40°01'07.330"N	80°35'58.624"W	4726.28	150.267	6.05
10906.00	89.900	154.400	6400.28	4812.05	-4181.29	2381.85	1692060.26	554963.18	40°01'06.571"N	80°35'58.126"W	4812.10	150.332	1.36
10993.00	90.000	155.500	6400.36	4898.74	-4260.10	2418.68	1692097.10	554884.37	40°01'05.797"N	80°35'57.640"W	4898.83	150.414	1.27
11080.00	91.100	153.900	6399.52	4985.45	-4338.75	2455.86	1692134.27	554805.73	40°01'05.024"N	80°35'57.150"W	4985.58	150.489	2.23
11166.00	90.800	148.300	6398.10	5071.39	-4414.00	2497.40	1692175.81	554730.48	40°01'04.285"N	80°35'56.604"W	5071.53	150.499	6.52
11253.00	89.100	147.200	6398.17	5158.31	-4487.57	2543.82	1692222.23	554656.91	40°01'03.564"N	80°35'55.996"W	5158.42	150.453	2.33
11340.00	89.100	146.200	6399.54	5245.15	-4560.28	2591.58	1692269.99	554584.21	40°01'02.851"N	80°35'55.371"W	5245.23	150.391	1.15
11427.00	89.300	147.600	6400.75	5332.00	-4633.15	2639.09	1692317.49	554511.34	40°01'02.137"N	80°35'54.749"W	5332.06	150.334	1.63
11513.00	89.800	153.800	6401.43	5417.95	-4708.11	2681.15	1692359.55	554436.38	40°01'01.401"N	80°35'54.197"W	5418.01	150.340	7.23
11600.00	90.000	153.200	6401.58	5504.80	-4785.97	2719.97	1692398.37	554358.52	40°01'00.636"N	80°35'53.686"W	5504.88	150.389	0.73
11687.00	89.100	149.700	6402.26	5591.75	-4862.37	2761.54	1692439.94	554282.12	40°00'59.886"N	80°35'53.139"W	5591.85	150.406	4.15
11773.00	89.200	147.700	6403.54	5677.72	-4935.85	2806.21	1692484.61	554208.65	40°00'59.166"N	80°35'52.554"W	5677.80	150.380	2.33
11860.00	89.100	146.800	6404.83	5764.60	-5009.01	2853.27	1692531.67	554135.49	40°00'58.449"N	80°35'51.937"W	5764.66	150.333	1.04
11947.00	89.200	147.600	6406.12	5851.48	-5082.13	2900.40	1692578.79	554062.37	40°00'57.732"N	80°35'51.320"W	5851.52	150.286	0.93
12034.00	89.200	147.900	6407.34	5938.40	-5155.70	2946.82	1692625.21	553988.81	40°00'57.010"N	80°35'50.712"W	5938.43	150.249	0.34
12121.00	89.200	148.700	6408.55	6025.35	-5229.71	2992.53	1692670.92	553914.80	40°00'56.284"N	80°35'50.113"W	6025.37	150.221	0.92
12208.00	89.100	148.400	6409.84	6112.31	-5303.92	3037.91	1692716.30	553840.59	40°00'55.557"N	80°35'49.518"W	6112.33	150.197	0.36
12294.00	89.200	145.500	6411.12	6198.16	-5375.99	3084.81	1692763.19	553768.52	40°00'54.850"N	80°35'48.904"W	6198.17	150.152	3.37
12381.00	89.100	143.400	6412.41	6284.73	-5446.76	3135.38	1692813.77	553697.75	40°00'54.157"N	80°35'48.243"W	6284.73	150.074	2.42
12468.00	89.100	145.400	6413.77	6371.29	-5517.49	3186.02	1692864.40	553627.03	40°00'53.464"N	80°35'47.581"W	6371.30	149.996	2.30



Actual Wellpath Report

BHI NaviTrak MWD Surveys (5600') (5655'-13959') Proj:14000'
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REFERENCE WELLPATH IDENTIFICATION

Operator	CHESAPEAKE APPALACHIA, LLC	Slot	Slot 8
Area	Ohio County, WV	Well	Brian Dytko 8H
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Facility	Brian Dytko		

WELLPATH DATA (169 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]
12555.00	89.100	148.700	6415.14	6458.15	-5590.48	3233.32	1692911.71	553554.04	40°00'52.748"N	80°35'46.962"W	6458.16	149.957	3.79
12642.00	89.000	150.900	6416.58	6545.13	-5665.66	3277.08	1692955.46	553478.87	40°00'52.011"N	80°35'46.388"W	6545.14	149.954	2.53
12728.00	88.900	151.500	6418.16	6631.10	-5741.00	3318.50	1692996.88	553403.52	40°00'51.271"N	80°35'45.844"W	6631.11	149.971	0.71
12815.00	89.100	151.700	6419.68	6718.05	-5817.52	3359.87	1693038.25	553327.01	40°00'50.520"N	80°35'45.300"W	6718.06	149.992	0.33
12902.00	89.100	152.300	6421.04	6804.99	-5894.33	3400.71	1693079.09	553250.20	40°00'49.766"N	80°35'44.763"W	6805.00	150.017	0.69
12989.00	89.600	151.400	6422.03	6891.94	-5971.03	3441.76	1693120.13	553173.50	40°00'49.013"N	80°35'44.224"W	6891.94	150.040	1.18
13075.00	89.700	149.800	6422.56	6977.94	-6045.95	3483.97	1693162.34	553098.58	40°00'48.278"N	80°35'43.670"W	6977.94	150.047	1.86
13162.00	89.600	148.600	6423.09	7064.92	-6120.68	3528.52	1693206.89	553023.86	40°00'47.545"N	80°35'43.085"W	7064.92	150.037	1.38
13249.00	89.600	147.800	6423.70	7151.87	-6194.62	3574.36	1693252.73	552949.93	40°00'46.820"N	80°35'42.485"W	7151.88	150.015	0.92
13336.00	89.700	148.800	6424.23	7238.83	-6268.64	3620.08	1693298.44	552875.91	40°00'46.094"N	80°35'41.886"W	7238.84	149.994	1.16
13423.00	89.700	149.600	6424.68	7325.82	-6343.36	3664.62	1693342.99	552801.18	40°00'45.361"N	80°35'41.301"W	7325.83	149.985	0.92
13509.00	89.700	149.400	6425.13	7411.81	-6417.46	3708.27	1693386.63	552727.09	40°00'44.634"N	80°35'40.729"W	7411.82	149.979	0.23
13596.00	89.600	149.300	6425.66	7498.80	-6492.31	3752.62	1693430.98	552652.25	40°00'43.899"N	80°35'40.147"W	7498.81	149.972	0.16
13683.00	89.600	149.800	6426.27	7585.80	-6567.31	3796.71	1693475.07	552577.25	40°00'43.164"N	80°35'39.569"W	7585.81	149.967	0.57
13769.00	89.600	150.100	6426.87	7671.79	-6641.74	3839.77	1693518.13	552502.82	40°00'42.433"N	80°35'39.004"W	7671.81	149.967	0.35
13856.00	89.700	151.100	6427.40	7758.79	-6717.54	3882.48	1693560.84	552427.02	40°00'41.689"N	80°35'38.443"W	7758.80	149.974	1.16
13943.00	89.600	150.500	6427.94	7845.78	-6793.48	3924.92	1693603.28	552351.08	40°00'40.944"N	80°35'37.886"W	7845.79	149.983	0.70
13959.00	89.600	151.000	6428.05	7861.78	-6807.44	3932.74	1693611.10	552337.13	40°00'40.807"N	80°35'37.783"W	7861.79	149.984	3.12
14000.00	89.600	151.000	6428.33	7902.77	-6843.30	3952.62	1693630.97	552301.27	40°00'40.455"N	80°35'37.522"W	7902.78	149.990	0.00



Actual Wellpath Report

BHI NaviTrak MWD Surveys (5600') (5655'-13959') Proj:14000'
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REFERENCE WELLPATH IDENTIFICATION

Operator	CHESAPEAKE APPALACHIA, LLC	Slot	Slot 8
Area	Ohio County, WV	Well	Brian Dytko 8H
Field	Ohio	Wellbore	Brian Dytko 8H (AWB)
Facility	Brian Dytko		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Dytko 8H LP: Rev-2		6307.99	-466.17	230.33	1689908.82	558678.16	40°01'43.022"N	80°36'26.365"W	point
Dytko 8H PBHL: Boundary		6416.00	-7639.42	3551.67	1693230.04	551505.18	40°00'32.540"N	80°35'42.550"W	polygon
Dytko 8H PBHL: Rev-2 [extended]		6416.00	-7024.74	4029.26	1693707.61	552119.83	40°00'38.671"N	80°35'36.509"W	point
Dytko 8H PBHL: plat 5.6.11		6416.00	-6682.75	4438.77	1694117.11	552461.81	40°00'42.100"N	80°35'31.300"W	point
Dytko 8H PBHL: Rev-1		6416.80	-5636.01	3245.37	1692923.76	553508.51	40°00'52.300"N	80°35'46.800"W	point

WELLPATH COMPOSITION - Ref Wellbore: Brian Dytko 8H (AWB) Ref Wellpath: BHI NaviTrak MWD Surveys (5600') (5655'-13959') Proj:14000'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	5600.00	Generic gyro - continuous (Standard)	Vaughn / Continuous gyro (0') (100'-5600')	Brian Dytko 8H (AWB)
5600.00	13959.00	NaviTrak (MagCorr)	BHI NaviTrak MWD Surveys (5600') (5655'-13959')	Brian Dytko 8H (AWB)
13959.00	14000.00	Blind Drilling (std)	Projection to bit	Brian Dytko 8H (AWB)



Actual Wellpath Report

BHI NaviTrak MWD Surveys (5600') (5655'-13959') Proj:14000'
Page 9 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	CHESAPEAKE APPALACHIA, LLC	Slot	Slot 8
Area	Ohio County, WV	Well	Brian Dytko 8H
Field	Ohio	Wellbore	Brian Dytko 8H (AWB)
Facility	Brian Dytko		

COMMENTS

Wellpath general comments

API: 47-069-00071-00

Rig: Nomac 243

BHI Job#: 3785804

Duration: 4/25/11-5/7/11

Vaughn/Continuous gyro (0') (100'-5600')

BHI NaviTrak MWD Surveys (5600') (5655'-13959')

TD Projected To MD: 14000'