



CHESAPEAKE APPALACHIA, LLC

Location: Brooke County, WV
 Field: Brooke
 Facility: Barry Greathouse B

Slot: Slot 3H
 Well: Barry Greathouse B 3H
 Wellbore: Barry Greathouse B 3H (PWB)



Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	5000.00	0.250	284.870	4999.83	28.82	-17.08	0.00	33.33
KOP	5034.17	0.250	284.870	5034.00	28.85	-17.22	0.00	33.43
End of 3D Arc	5329.00	35.504	217.815	5310.26	-40.85	-72.09	12.01	-6.56
End of 3D Arc	6206.55	90.000	335.007	5820.00	239.40	-559.60	12.01	453.42
PBHL	11012.15	90.000	335.007	5820.00	4595.00	-2590.00	0.00	5259.02

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
Barry Greathouse B	1681101.474	616712.735	40°11'15.418"N	80°38'29.054"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot 3H	0.00	0.00	1681101.474	616712.735	40°11'15.418"N	80°38'29.054"W

Rig on Slot 3H (RT) to Mud line (At Slot: Slot 3H) 24ft
 Mean Sea Level to Mud line (At Slot: Slot 3H) -1150ft
 Rig on Slot 3H (RT) to Mean Sea Level 1174ft

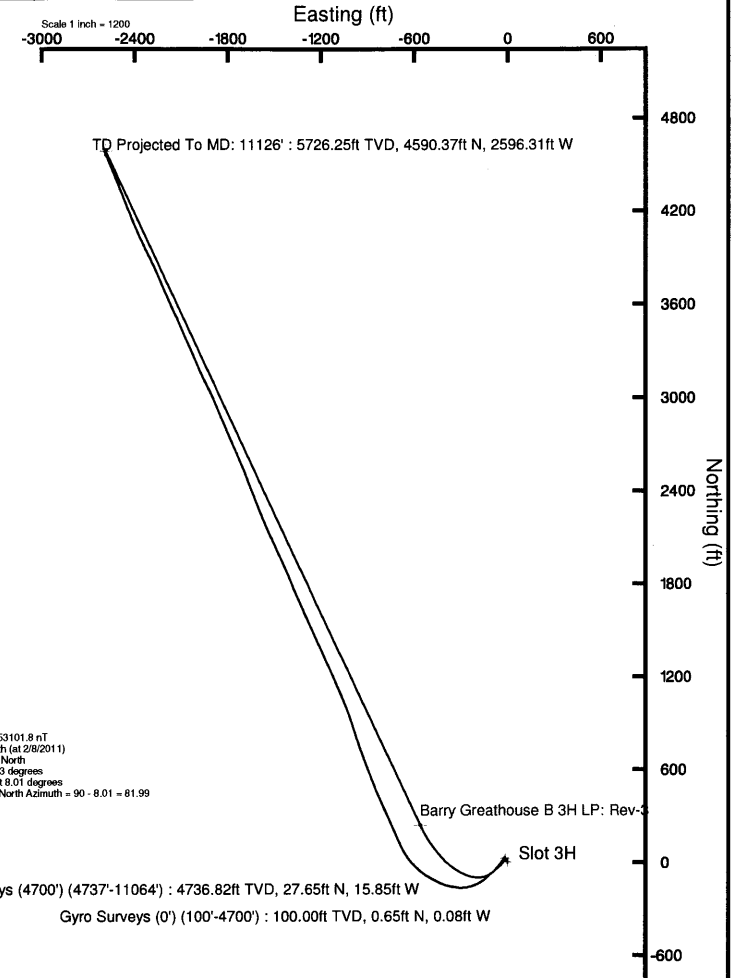
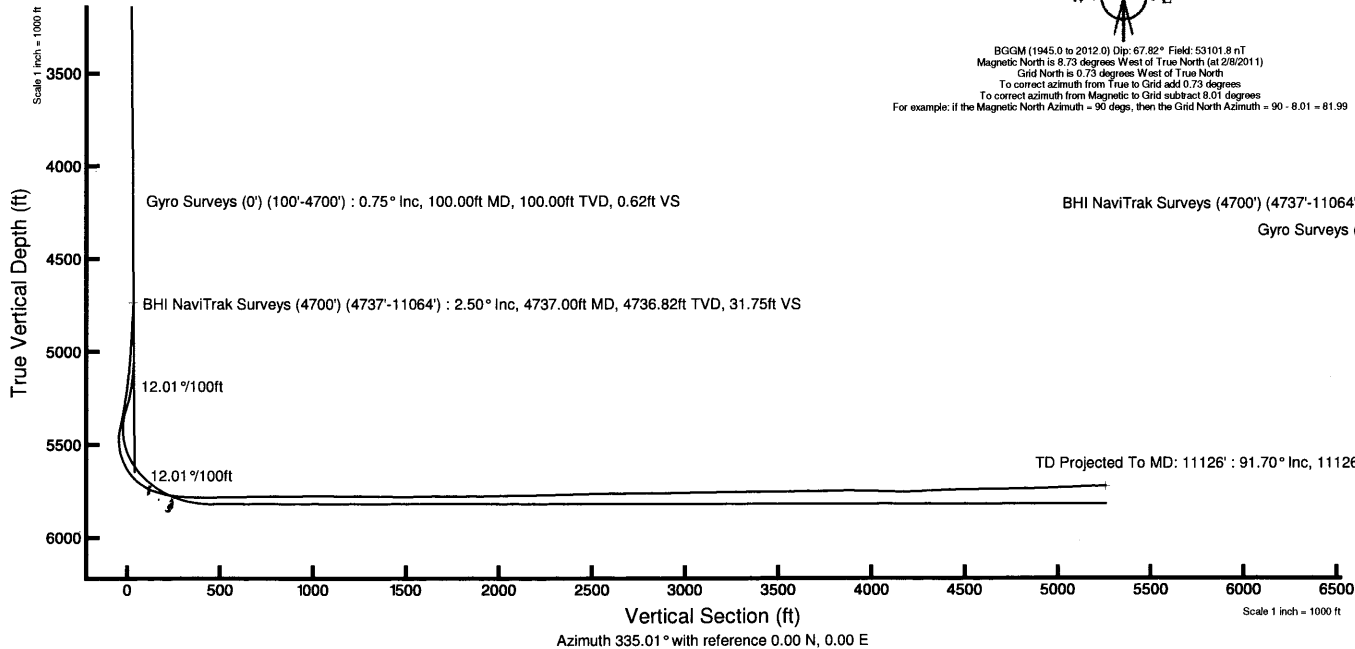
Tie-On Position

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
5000.00	0.250	284.870	4999.83	28.82	-17.08	1681084.40	616741.55	40°11'15.700"N	80°38'29.279"W

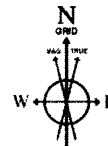
Hole and Casing Sections

Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
20in Conductor	0.00	76.00	76.00	0.00	76.00	0.00	0.00	0.38	-0.05	Barry Greathouse B 3H (PWB)
13.375in Casing Surface	0.00	325.00	325.00	0.00	324.98	0.00	0.00	2.82	-0.61	Barry Greathouse B 3H (PWB)
9.625in Casing Intermediate	0.00	1716.00	1716.00	0.00	1715.94	0.00	0.00	12.16	-0.26	Barry Greathouse B 3H (PWB)
5.5in Casing Production	0.00	11012.15	11012.15	0.00	5820.00	0.00	0.00	4595.00	-2590.00	Barry Greathouse B 3H (PWB)

Plot reference wellpath is Rev'D 0	
True vertical depths are referenced to Rig on Slot 3H (RT)	Grid System: NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet
Measured depths are referenced to Rig on Slot 3H (RT)	North Reference: Grid north
Rig on Slot 3H (RT) to Mean Sea Level: 1174 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot 3H): -1150 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: abryzes on 5/4/2011



API:47-009-00085-00
 Rig: Nomac 243
 BHI Job#: 3648051
 Duration: 3/5/11-3/21/11



BGGM (1945.0 to 2012.0) Dip: 67.82° Field: 53101.8 nT
 Magnetic North is 8.73 degrees West of True North (at 2/8/2011)
 Grid North is 0.73 degrees West of True North
 To correct azimuth from True to Grid add 0.73 degrees
 To correct azimuth from Magnetic to Grid subtract 8.01 degrees
 For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 - 8.01 = 81.99

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Actual Wellpath Report

BHI NaviTrak MWD Surveys (4700') (4737'-11064') Proj: 11126'
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REFERENCE WELLPATH IDENTIFICATION

Operator	CHESAPEAKE APPALACHIA, LLC	Slot	Slot 3H
Area	Brooke County, WV	Well	Barry Greathouse B 3H
Field	Brooke	Wellbore	Barry Greathouse B 3H (AWB)
Facility	Barry Greathouse B		

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	0.999989	Report Generated	6/16/2011 at 5:45:59 PM
Convergence at slot	0.73° West	Database/Source file	WA_EasternUS/Barry_Greathouse_B_3H_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	1681101.47	616712.74	40°11'15.418"N	80°38'29.054"W
Facility Reference Pt			1681101.47	616712.74	40°11'15.418"N	80°38'29.054"W
Field Reference Pt			0.00	0.00	38°17'12.460"N	86°28'23.077"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on Slot 3H (RT) to Facility Vertical Datum	24.00ft
Horizontal Reference Pt	Slot	Rig on Slot 3H (RT) to Mean Sea Level	1174.00ft
Vertical Reference Pt	Rig on Slot 3H (RT)	Rig on Slot 3H (RT) to Mud Line at Slot (Slot 3H)	24.00ft
MD Reference Pt	Rig on Slot 3H (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	335.01°

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Area	Brooke County, WV	Well	Barry Greathouse B 3H
Field	Brooke	Wellbore	Barry Greathouse B 3H (AWB)
Facility	Barry Greathouse B		

WELLPATH DATA (136 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	353.160	0.00	0.00	0.00	0.00	1681101.47	616712.73	40°11'15.418"N	80°38'29.054"W	0.00	0.000	0.00
100.00	0.750	353.160	100.00	0.62	0.65	-0.08	1681101.40	616713.38	40°11'15.424"N	80°38'29.056"W	0.65	353.160	0.75
200.00	0.750	350.200	199.99	1.88	1.94	-0.27	1681101.21	616714.68	40°11'15.437"N	80°38'29.058"W	1.96	352.173	0.04
300.00	0.250	313.220	299.98	2.71	2.74	-0.54	1681100.94	616715.47	40°11'15.445"N	80°38'29.062"W	2.79	348.893	0.57
400.00	0.250	343.240	399.98	3.13	3.10	-0.76	1681100.71	616715.83	40°11'15.448"N	80°38'29.065"W	3.19	346.221	0.13
500.00	0.250	99.260	499.98	3.22	3.27	-0.61	1681100.87	616716.01	40°11'15.450"N	80°38'29.063"W	3.33	349.485	0.42
600.00	0.500	15.280	599.98	3.43	3.66	-0.28	1681101.20	616716.39	40°11'15.454"N	80°38'29.059"W	3.67	355.671	0.54
700.00	0.250	357.300	699.98	3.97	4.30	-0.17	1681101.30	616717.03	40°11'15.460"N	80°38'29.057"W	4.30	357.705	0.27
800.00	0.250	356.320	799.98	4.37	4.73	-0.20	1681101.28	616717.47	40°11'15.464"N	80°38'29.058"W	4.74	357.623	0.00
900.00	0.750	12.370	899.97	5.09	5.59	-0.07	1681101.40	616718.32	40°11'15.473"N	80°38'29.056"W	5.59	359.280	0.51
1000.00	0.500	338.400	999.97	6.05	6.63	-0.09	1681101.38	616719.37	40°11'15.483"N	80°38'29.057"W	6.63	359.217	0.44
1100.00	0.500	334.410	1099.96	6.92	7.43	-0.44	1681101.03	616720.17	40°11'15.491"N	80°38'29.061"W	7.45	356.614	0.03
1200.00	0.500	352.430	1199.96	7.78	8.26	-0.69	1681100.79	616720.99	40°11'15.499"N	80°38'29.065"W	8.29	355.254	0.16
1300.00	0.250	8.450	1299.96	8.37	8.91	-0.71	1681100.76	616721.64	40°11'15.506"N	80°38'29.065"W	8.94	355.435	0.27
1400.00	0.500	343.470	1399.96	8.99	9.54	-0.80	1681100.67	616722.28	40°11'15.512"N	80°38'29.066"W	9.57	355.188	0.29
1500.00	0.750	36.490	1499.95	9.73	10.49	-0.54	1681100.94	616723.22	40°11'15.521"N	80°38'29.063"W	10.50	357.062	0.60
1600.00	0.500	349.610	1599.95	10.47	11.44	-0.23	1681101.25	616724.18	40°11'15.531"N	80°38'29.059"W	11.44	358.860	0.55
1700.00	0.250	11.620	1699.94	11.06	12.08	-0.26	1681101.21	616724.82	40°11'15.537"N	80°38'29.060"W	12.09	358.756	0.28
1800.00	0.500	326.640	1799.94	11.67	12.66	-0.46	1681101.02	616725.40	40°11'15.543"N	80°38'29.062"W	12.67	357.927	0.37
1900.00	0.250	296.660	1899.94	12.27	13.12	-0.89	1681100.58	616725.86	40°11'15.547"N	80°38'29.068"W	13.15	356.106	0.31
2000.00	0.250	313.680	1999.94	12.65	13.37	-1.25	1681100.23	616726.11	40°11'15.550"N	80°38'29.073"W	13.43	354.677	0.07
2100.00	0.500	306.700	2099.94	13.23	13.78	-1.75	1681099.72	616726.52	40°11'15.554"N	80°38'29.079"W	13.90	352.750	0.25
2200.00	0.750	312.720	2199.93	14.22	14.49	-2.58	1681098.89	616727.22	40°11'15.560"N	80°38'29.090"W	14.72	349.887	0.26
2300.00	0.750	289.740	2299.92	15.29	15.15	-3.68	1681097.79	616727.89	40°11'15.567"N	80°38'29.104"W	15.59	346.346	0.30
2400.00	0.500	303.760	2399.92	16.12	15.62	-4.66	1681096.81	616728.35	40°11'15.571"N	80°38'29.117"W	16.30	343.386	0.29
2500.00	0.500	323.780	2499.91	16.92	16.21	-5.28	1681096.19	616728.95	40°11'15.577"N	80°38'29.125"W	17.05	341.959	0.17
2600.00	0.500	301.700	2599.91	17.72	16.79	-5.91	1681095.57	616729.53	40°11'15.583"N	80°38'29.133"W	17.80	340.613	0.19
2700.00	0.750	283.620	2699.90	18.49	17.18	-6.92	1681094.56	616729.91	40°11'15.586"N	80°38'29.146"W	18.52	338.066	0.32
2800.00	0.250	274.530	2799.90	19.01	17.35	-7.77	1681093.70	616730.08	40°11'15.588"N	80°38'29.157"W	19.01	335.872	0.50
2900.00	0.500	294.450	2899.90	19.45	17.55	-8.39	1681093.09	616730.28	40°11'15.590"N	80°38'29.165"W	19.45	334.457	0.28



Actual Wellpath Report

BHI NaviTrak MWD Surveys (4700') (4737'-11064') Proj: 11126'
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WELLPATH DATA (136 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	0.750	323.370	2999.89	20.42	18.25	-9.17	1681092.30	616730.99	40°11'15.597"N	80°38'29.176"W	20.43	333.317	0.39
3100.00	0.500	314.290	3099.88	21.47	19.08	-9.88	1681091.60	616731.82	40°11'15.605"N	80°38'29.185"W	21.49	332.636	0.27
3200.00	0.500	311.210	3199.88	22.27	19.67	-10.52	1681090.96	616732.41	40°11'15.611"N	80°38'29.193"W	22.31	331.874	0.03
3300.00	0.750	294.130	3299.87	23.17	20.23	-11.44	1681090.03	616732.96	40°11'15.616"N	80°38'29.205"W	23.24	330.507	0.31
3400.00	0.750	301.050	3399.87	24.21	20.83	-12.60	1681088.87	616733.57	40°11'15.622"N	80°38'29.220"W	24.35	328.836	0.09
3500.00	0.250	358.970	3499.86	24.95	21.39	-13.16	1681088.31	616734.12	40°11'15.627"N	80°38'29.228"W	25.12	328.389	0.65
3600.00	0.500	328.320	3599.86	25.58	21.98	-13.40	1681088.08	616734.71	40°11'15.633"N	80°38'29.231"W	25.74	328.635	0.31
3700.00	0.500	318.240	3699.86	26.43	22.68	-13.92	1681087.56	616735.41	40°11'15.640"N	80°38'29.237"W	26.61	328.461	0.09
3800.00	0.500	324.160	3799.85	27.28	23.35	-14.46	1681087.01	616736.09	40°11'15.647"N	80°38'29.245"W	27.47	328.231	0.05
3900.00	0.250	321.080	3899.85	27.92	23.88	-14.86	1681086.62	616736.61	40°11'15.652"N	80°38'29.250"W	28.12	328.112	0.25
4000.00	0.250	345.000	3999.85	28.35	24.26	-15.05	1681086.43	616736.99	40°11'15.655"N	80°38'29.252"W	28.55	328.186	0.10
4100.00	0.500	325.920	4099.85	28.99	24.83	-15.35	1681086.12	616737.57	40°11'15.661"N	80°38'29.256"W	29.19	328.276	0.28
4200.00	0.500	339.840	4199.84	29.86	25.60	-15.75	1681085.73	616738.34	40°11'15.669"N	80°38'29.261"W	30.06	328.409	0.12
4300.00	0.500	29.750	4299.84	30.54	26.39	-15.68	1681085.80	616739.12	40°11'15.676"N	80°38'29.261"W	30.70	329.285	0.42
4400.00	0.250	57.770	4399.84	30.82	26.89	-15.28	1681086.20	616739.62	40°11'15.681"N	80°38'29.256"W	30.92	330.392	0.30
4500.00	0.250	13.790	4499.84	31.02	27.21	-15.04	1681086.43	616739.95	40°11'15.685"N	80°38'29.253"W	31.09	331.070	0.19
4600.00	0.250	330.810	4599.84	31.41	27.62	-15.10	1681086.38	616740.35	40°11'15.689"N	80°38'29.253"W	31.47	331.338	0.18
4700.00	0.500	334.820	4699.83	32.06	28.20	-15.39	1681086.09	616740.94	40°11'15.694"N	80°38'29.257"W	32.13	331.381	0.25
4737.00	2.500	209.500	4736.82	31.75	27.65	-15.85	1681085.62	616740.38	40°11'15.689"N	80°38'29.263"W	31.87	330.167	7.62
4780.00	5.500	205.300	4779.71	29.89	24.97	-17.20	1681084.28	616737.70	40°11'15.662"N	80°38'29.280"W	30.31	325.440	7.01
4866.00	5.700	206.800	4865.30	24.62	17.43	-20.88	1681080.59	616730.16	40°11'15.587"N	80°38'29.326"W	27.20	309.845	0.29
4953.00	4.900	201.400	4951.93	19.38	10.11	-24.19	1681077.29	616722.85	40°11'15.514"N	80°38'29.368"W	26.22	292.687	1.08
5039.00	7.100	208.800	5037.46	13.71	2.03	-28.09	1681073.39	616714.77	40°11'15.434"N	80°38'29.417"W	28.16	274.140	2.71
5126.00	14.500	220.600	5122.87	6.02	-10.97	-37.78	1681063.69	616701.77	40°11'15.304"N	80°38'29.539"W	39.34	253.812	8.83
5213.00	22.200	226.600	5205.39	-3.69	-30.56	-56.84	1681044.63	616682.17	40°11'15.108"N	80°38'29.782"W	64.54	241.735	9.10
5300.00	28.100	228.000	5284.10	-14.88	-55.59	-84.03	1681017.44	616657.15	40°11'14.858"N	80°38'30.128"W	100.76	236.516	6.82
5387.00	35.400	229.500	5358.04	-27.63	-85.70	-118.47	1680983.01	616627.03	40°11'14.556"N	80°38'30.567"W	146.22	234.117	8.44
5431.00	38.500	228.600	5393.20	-34.91	-103.04	-138.44	1680963.04	616609.69	40°11'14.382"N	80°38'30.821"W	172.58	233.339	7.15
5475.00	40.600	233.700	5427.13	-41.59	-120.58	-160.26	1680941.22	616592.16	40°11'14.206"N	80°38'31.099"W	200.55	233.042	8.79
5517.00	41.100	240.500	5458.92	-45.36	-135.48	-183.30	1680918.18	616577.26	40°11'14.056"N	80°38'31.394"W	227.93	233.532	10.65



Actual Wellpath Report

BHI NaviTrak MWD Surveys (4700') (4737'-11064') Proj: 11126'
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5561.00	41.300	247.800	5492.04	-45.79	-148.09	-209.34	1680892.13	616564.64	40°11'13.928"N	80°38'31.727"W	256.43	234.724	10.93
5604.00	41.600	255.300	5524.29	-42.55	-157.08	-236.31	1680865.17	616555.66	40°11'13.836"N	80°38'32.073"W	283.75	236.387	11.56
5648.00	42.300	262.500	5557.03	-35.48	-162.72	-265.13	1680836.35	616550.01	40°11'13.776"N	80°38'32.444"W	311.09	238.461	11.05
5692.00	43.300	269.400	5589.34	-24.80	-164.82	-294.92	1680806.56	616547.92	40°11'13.752"N	80°38'32.827"W	337.85	240.801	10.89
5735.00	45.200	275.300	5620.15	-11.00	-163.56	-324.87	1680776.61	616549.18	40°11'13.761"N	80°38'33.213"W	363.72	243.276	10.54
5778.00	48.600	281.300	5649.54	6.25	-158.99	-355.90	1680745.58	616553.75	40°11'13.802"N	80°38'33.614"W	389.79	245.929	12.89
5821.00	52.900	286.800	5676.75	27.24	-150.86	-388.16	1680713.32	616561.87	40°11'13.878"N	80°38'34.031"W	416.44	248.761	14.07
5865.00	57.900	291.500	5701.74	52.48	-138.95	-422.33	1680679.15	616573.79	40°11'13.992"N	80°38'34.473"W	444.60	251.788	14.36
5909.00	63.100	295.900	5723.41	81.25	-123.53	-457.36	1680644.13	616589.20	40°11'14.139"N	80°38'34.927"W	473.74	254.885	14.67
5952.00	68.700	299.700	5740.96	112.50	-105.21	-492.04	1680609.44	616607.52	40°11'14.316"N	80°38'35.376"W	503.16	257.930	15.32
5996.00	73.100	304.700	5755.36	147.44	-83.05	-527.19	1680574.29	616629.69	40°11'14.531"N	80°38'35.833"W	533.69	261.048	14.67
6039.00	76.700	309.500	5766.57	184.12	-58.01	-560.28	1680541.21	616654.73	40°11'14.774"N	80°38'36.263"W	563.27	264.089	13.65
6082.00	80.300	315.500	5775.15	223.02	-29.55	-591.31	1680510.17	616683.19	40°11'15.051"N	80°38'36.668"W	592.05	267.139	16.03
6126.00	84.400	320.100	5781.01	264.66	2.75	-620.58	1680480.90	616715.48	40°11'15.367"N	80°38'37.050"W	620.59	270.253	13.93
6169.00	87.300	326.300	5784.12	306.62	37.07	-646.26	1680455.23	616749.80	40°11'15.703"N	80°38'37.387"W	647.32	273.283	15.88
6213.00	89.400	330.800	5785.39	350.30	74.58	-669.20	1680432.29	616787.31	40°11'16.070"N	80°38'37.688"W	673.34	276.359	11.28
6256.00	89.700	335.500	5785.73	393.27	112.93	-688.61	1680412.87	616825.66	40°11'16.447"N	80°38'37.945"W	697.81	279.313	10.95
6343.00	90.600	336.000	5785.50	480.26	192.25	-724.34	1680377.14	616904.98	40°11'17.226"N	80°38'38.418"W	749.42	284.864	1.18
6430.00	90.600	336.000	5784.59	567.24	271.73	-759.73	1680341.76	616984.46	40°11'18.007"N	80°38'38.887"W	806.86	289.680	0.00
6517.00	90.700	336.200	5783.60	654.22	351.26	-794.97	1680306.51	617063.99	40°11'18.789"N	80°38'39.354"W	869.12	293.838	0.26
6604.00	90.800	337.300	5782.46	741.17	431.19	-829.31	1680272.17	617143.92	40°11'19.574"N	80°38'39.810"W	934.71	297.471	1.27
6690.00	90.600	338.100	5781.41	827.07	510.75	-861.94	1680239.54	617223.48	40°11'20.356"N	80°38'40.243"W	1001.90	300.649	0.96
6777.00	90.400	339.000	5780.65	913.90	591.72	-893.75	1680207.73	617304.45	40°11'21.152"N	80°38'40.666"W	1071.88	303.507	1.06
6864.00	90.100	340.200	5780.27	1000.62	673.26	-924.08	1680177.41	617385.99	40°11'21.954"N	80°38'41.070"W	1143.33	306.076	1.42
6951.00	89.800	341.200	5780.35	1087.19	755.37	-952.83	1680148.65	617468.09	40°11'22.762"N	80°38'41.454"W	1215.93	308.406	1.20
7038.00	89.700	342.000	5780.73	1173.61	837.92	-980.30	1680121.19	617550.64	40°11'23.574"N	80°38'41.822"W	1289.61	310.523	0.93
7124.00	89.100	340.700	5781.63	1259.08	919.40	-1007.79	1680093.69	617632.12	40°11'24.376"N	80°38'42.189"W	1364.16	312.374	1.66
7211.00	89.400	338.800	5782.77	1345.77	1001.01	-1037.90	1680063.59	617713.73	40°11'25.178"N	80°38'42.591"W	1441.97	313.963	2.21
7298.00	88.900	338.200	5784.06	1432.60	1081.95	-1069.78	1680031.70	617794.67	40°11'25.974"N	80°38'43.015"W	1521.53	315.324	0.90
7385.00	90.800	337.200	5784.29	1519.50	1162.44	-1102.80	1679998.69	617875.15	40°11'26.765"N	80°38'43.453"W	1602.31	316.508	2.47



Actual Wellpath Report

BHI NaviTrak MWD Surveys (4700') (4737'-11064') Proj: 11126'
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REFERENCE WELLPATH IDENTIFICATION

Operator	CHESAPEAKE APPALACHIA, LLC	Slot	Slot 3H
Area	Brooke County, WV	Well	Barry Greathouse B 3H
Field	Brooke	Wellbore	Barry Greathouse B 3H (AWB)
Facility	Barry Greathouse B		

WELLPATH DATA (136 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]
7428.00	91.200	335.300	5783.54	1562.48	1201.79	-1120.11	1679981.38	617914.50	40°11'27.152"N	80°38'43.683"W	1642.84	317.015	4.51
7515.00	91.000	335.200	5781.87	1649.46	1280.78	-1156.53	1679944.96	617993.50	40°11'27.928"N	80°38'44.165"W	1725.67	317.918	0.26
7601.00	90.500	335.800	5780.74	1735.45	1359.03	-1192.19	1679909.30	618071.75	40°11'28.697"N	80°38'44.637"W	1807.84	318.742	0.91
7688.00	89.700	335.700	5780.59	1822.44	1438.35	-1227.92	1679873.57	618151.07	40°11'29.476"N	80°38'45.111"W	1891.20	319.513	0.93
7775.00	90.400	334.200	5780.51	1909.44	1517.17	-1264.75	1679836.74	618229.88	40°11'30.250"N	80°38'45.598"W	1975.19	320.184	1.90
7862.00	91.400	336.400	5779.15	1996.42	1596.19	-1301.10	1679800.39	618308.90	40°11'31.026"N	80°38'46.080"W	2059.29	320.816	2.78
7949.00	91.200	337.100	5777.17	2083.36	1676.10	-1335.44	1679766.06	618388.82	40°11'31.812"N	80°38'46.535"W	2143.06	321.454	0.84
8036.00	90.700	337.200	5775.73	2170.28	1756.26	-1369.21	1679732.28	618468.98	40°11'32.600"N	80°38'46.984"W	2226.93	322.059	0.59
8122.00	90.500	338.000	5774.83	2256.19	1835.77	-1401.98	1679699.51	618548.48	40°11'33.381"N	80°38'47.419"W	2309.89	322.631	0.96
8209.00	92.200	335.300	5772.78	2343.12	1915.61	-1436.45	1679665.04	618628.32	40°11'34.166"N	80°38'47.876"W	2394.36	323.135	3.67
8296.00	91.600	335.200	5769.90	2430.07	1994.58	-1472.86	1679628.64	618707.29	40°11'34.941"N	80°38'48.358"W	2479.44	323.557	0.70
8383.00	91.000	335.600	5767.92	2517.05	2073.66	-1509.06	1679592.43	618786.37	40°11'35.718"N	80°38'48.838"W	2564.63	323.956	0.83
8470.00	90.400	336.300	5766.86	2604.03	2153.10	-1544.51	1679556.98	618865.81	40°11'36.499"N	80°38'49.307"W	2649.79	324.346	1.06
8513.00	89.900	336.600	5766.75	2647.01	2192.52	-1561.69	1679539.80	618905.23	40°11'36.886"N	80°38'49.535"W	2691.85	324.538	1.36
8556.00	89.900	337.300	5766.82	2689.99	2232.09	-1578.53	1679522.96	618944.79	40°11'37.275"N	80°38'49.759"W	2733.86	324.732	1.63
8643.00	91.500	339.000	5765.76	2776.85	2312.82	-1610.91	1679490.59	619025.53	40°11'38.069"N	80°38'50.189"W	2818.54	325.142	2.68
8730.00	90.400	337.800	5764.32	2863.68	2393.70	-1642.93	1679458.57	619106.40	40°11'38.864"N	80°38'50.615"W	2903.28	325.536	1.87
8817.00	91.100	339.400	5763.18	2950.50	2474.69	-1674.67	1679426.83	619187.40	40°11'39.660"N	80°38'51.037"W	2988.08	325.913	2.01
8904.00	90.400	337.600	5762.04	3037.32	2555.63	-1706.55	1679394.95	619268.33	40°11'40.456"N	80°38'51.461"W	3073.04	326.267	2.22
8991.00	91.000	336.000	5760.98	3124.27	2635.58	-1740.82	1679360.68	619348.28	40°11'41.242"N	80°38'51.916"W	3158.60	326.555	1.96
9078.00	91.000	336.600	5759.46	3211.24	2715.23	-1775.78	1679325.72	619427.93	40°11'42.024"N	80°38'52.380"W	3244.36	326.815	0.69
9165.00	90.400	337.000	5758.39	3298.19	2795.19	-1810.05	1679291.45	619507.89	40°11'42.810"N	80°38'52.835"W	3330.07	327.075	0.83
9252.00	90.100	336.400	5758.01	3385.15	2875.10	-1844.46	1679257.03	619587.79	40°11'43.595"N	80°38'53.291"W	3415.88	327.319	0.77
9339.00	91.200	337.400	5757.03	3472.09	2955.11	-1878.59	1679222.90	619667.81	40°11'44.382"N	80°38'53.744"W	3501.69	327.555	1.71
9382.00	90.800	336.400	5756.28	3515.06	2994.66	-1895.46	1679206.04	619707.35	40°11'44.770"N	80°38'53.968"W	3544.12	327.668	2.50
9425.00	90.800	334.900	5755.68	3558.05	3033.83	-1913.19	1679188.31	619746.52	40°11'45.155"N	80°38'54.203"W	3586.70	327.764	3.49
9512.00	90.000	334.000	5755.07	3645.05	3112.32	-1950.71	1679150.79	619825.01	40°11'45.926"N	80°38'54.699"W	3673.12	327.922	1.38
9599.00	90.900	335.200	5754.39	3732.04	3190.90	-1988.03	1679113.48	619903.60	40°11'46.698"N	80°38'55.193"W	3759.54	328.076	1.72
9686.00	91.500	337.400	5752.56	3818.99	3270.54	-2022.99	1679078.52	619983.23	40°11'47.480"N	80°38'55.657"W	3845.64	328.261	2.62
9773.00	89.200	336.200	5752.03	3905.94	3350.50	-2057.25	1679044.25	620063.19	40°11'48.266"N	80°38'56.111"W	3931.69	328.449	2.98



Actual Wellpath Report

BHI NaviTrak MWD Surveys (4700') (4737'-11064') Proj: 11126'
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REFERENCE WELLPATH IDENTIFICATION

Operator	CHESAPEAKE APPALACHIA, LLC	Slot	Slot 3H
Area	Brooke County, WV	Well	Barry Greathouse B 3H
Field	Brooke	Wellbore	Barry Greathouse B 3H (AWB)
Facility	Barry Greathouse B		

WELLPATH DATA (136 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]
9860.00	88.100	336.300	5754.08	3992.89	3430.11	-2092.28	1679009.22	620142.80	40°11'49.048"N	80°38'56.576"W	4017.87	328.618	1.27
9946.00	88.800	335.000	5756.41	4078.85	3508.43	-2127.73	1678973.77	620221.12	40°11'49.818"N	80°38'57.045"W	4103.21	328.765	1.72
10033.00	89.800	335.800	5757.47	4165.84	3587.52	-2163.94	1678937.56	620300.21	40°11'50.595"N	80°38'57.525"W	4189.63	328.902	1.47
10120.00	92.900	336.900	5755.42	4252.78	3667.18	-2198.83	1678902.68	620379.87	40°11'51.377"N	80°38'57.988"W	4275.87	329.053	3.78
10207.00	92.700	336.400	5751.17	4339.64	3746.96	-2233.27	1678868.24	620459.65	40°11'52.161"N	80°38'58.445"W	4362.02	329.204	0.62
10294.00	92.800	335.700	5747.00	4426.53	3826.38	-2268.54	1678832.96	620539.06	40°11'52.942"N	80°38'58.912"W	4448.31	329.338	0.81
10380.00	90.600	333.300	5744.45	4512.48	3903.96	-2305.55	1678795.96	620616.64	40°11'53.703"N	80°38'59.402"W	4533.92	329.435	3.78
10467.00	90.600	334.700	5743.54	4599.46	3982.15	-2343.68	1678757.82	620694.83	40°11'54.471"N	80°38'59.906"W	4620.64	329.521	1.61
10554.00	90.400	335.300	5742.78	4686.45	4060.99	-2380.45	1678721.06	620773.67	40°11'55.246"N	80°39'00.393"W	4707.25	329.622	0.73
10641.00	91.300	337.800	5741.49	4773.40	4140.79	-2415.06	1678686.44	620853.47	40°11'56.030"N	80°39'00.852"W	4793.61	329.748	3.05
10727.00	91.500	338.100	5739.38	4859.26	4220.48	-2447.34	1678654.17	620933.15	40°11'56.813"N	80°39'01.281"W	4878.72	329.892	0.42
10814.00	91.500	339.000	5737.11	4946.07	4301.42	-2479.14	1678622.36	621014.10	40°11'57.609"N	80°39'01.704"W	4964.71	330.043	1.03
10901.00	92.200	337.800	5734.30	5032.87	4382.27	-2511.15	1678590.35	621094.94	40°11'58.404"N	80°39'02.130"W	5050.76	330.186	1.60
10988.00	92.400	337.400	5730.81	5119.71	4462.64	-2544.28	1678557.23	621175.31	40°11'59.194"N	80°39'02.570"W	5136.97	330.311	0.51
11064.00	91.700	338.000	5728.09	5195.58	4532.91	-2573.10	1678528.41	621245.58	40°11'59.884"N	80°39'02.953"W	5212.30	330.419	1.21
11126.00	91.700	338.000	5726.25	5257.46	4590.37	-2596.31	1678505.19	621303.04	40°12'00.449"N	80°39'03.262"W	5273.74	330.507	0.00



Actual Wellpath Report

BHI NaviTrak MWD Surveys (4700') (4737'-11064') Proj: 11126'
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REFERENCE WELLPATH IDENTIFICATION

Operator	CHESAPEAKE APPALACHIA, LLC	Slot	Slot 3H
Area	Brooke County, WV	Well	Barry Greathouse B 3H
Field	Brooke	Wellbore	Barry Greathouse B 3H (AWB)
Facility	Barry Greathouse B		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Barry Greathouse B 3H PBHL Rev-3		5745.00	4595.00	-2590.00	1678511.51	621307.68	40°12'00.496"N	80°39'03.181"W	point
Barry Greathouse B 3H LP: Rev-3		5787.00	239.40	-559.60	1680541.88	616952.13	40°11'17.713"N	80°38'36.303"W	point

WELLPATH COMPOSITION - Ref Wellbore: Barry Greathouse B 3H (AWB) Ref Wellpath: BHI NaviTrak MWD Surveys (4700') (4737'-11064') Proj: 11126'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	4700.00	Generic gyro - northseeking (Standard)	MS Gyro Surveys (100'-4700')	Barry Greathouse B 3H (AWB)
4700.00	11064.00	NaviTrak (Standard)	BHI NaviTrak MWD Surveys (4700') (4737'-11064')	Barry Greathouse B 3H (AWB)
11064.00	11126.00	Blind Drilling (std)	Projection to bit	Barry Greathouse B 3H (AWB)



Actual Wellpath Report

BHI NaviTrak MWD Surveys (4700') (4737'-11064') Proj: 11126'
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REFERENCE WELLPATH IDENTIFICATION

Operator	CHESAPEAKE APPALACHIA, LLC	Slot	Slot 3H
Area	Brooke County, WV	Well	Barry Greathouse B 3H
Field	Brooke	Wellbore	Barry Greathouse B 3H (AWB)
Facility	Barry Greathouse B		

COMMENTS

Wellpath general comments

API: 47-009-00085-00

Rig: Nomac 243

BHI Job#: 3648051

Duration: 3/5/11-3/21/11

Gyro Surveys (0') (100'-4700')

BHI NaviTrak Surveys (4700') (4737'-11064')

TD Projected To MD: 11126'