



# Weatherford®

## SURVEY REPORT

Report Date: 7/4/2011  
 Customer: Chesapeake  
 Job Name: 4022958  
 Well Name: Bryan Neel 5H

Field: Marion Co  
 Rig: Nomac 241  
 Rig Loc: Marion Co

Survey Calculation Method: Minimum Curvature						
Magnetic Reference	Target Direction	Total Magnetic Field	Magnetic Dip Angle	Magnetic Declination	Grid Convergence	Total Correction
Grid North	334.97 deg	52665 nT	67.13 deg	-8.94 deg	-0.32 deg	-8.62 deg
Survey Tie-On	Depth	INC	AZ	TVD	NS	EW
	6745.00 ft	2.18 deg	250.47 deg	6744.32 ft	15.36 ft	-9.24 ft

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head			Vsect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)			
6799.00	2.49	250.05	6798.28	14.62	-11.31	18.03	0.57	
6842.00	2.77	256.87	6841.23	14.06	-13.20	18.33	0.99	
6885.00	2.52	256.94	6884.18	13.61	-15.13	18.74	0.59	
6927.00	1.95	251.95	6926.15	13.18	-16.71	19.02	1.43	
6970.00	1.88	293.21	6969.13	13.23	-18.06	19.63	3.14	
7013.00	3.30	338.18	7012.09	14.66	-19.16	21.39	5.52	
7056.00	4.78	356.19	7054.98	17.60	-19.74	24.30	4.50	
7098.00	7.30	1.40	7096.75	22.01	-19.79	28.32	6.13	
7141.00	8.82	2.64	7139.32	28.03	-19.58	33.68	3.55	
7183.00	12.22	356.65	7180.61	35.69	-19.69	40.67	8.50	
7226.00	15.85	356.76	7222.32	46.10	-20.28	50.35	8.45	
7269.00	18.80	357.91	7263.36	58.89	-20.87	62.19	6.90	
7311.00	21.84	355.05	7302.75	73.44	-21.79	75.76	7.60	
7353.00	24.44	2.11	7341.37	89.91	-22.14	90.84	9.05	
7396.00	31.90	1.67	7379.25	110.19	-21.49	108.93	17.36	
7439.00	39.72	2.68	7414.09	135.31	-20.51	131.28	18.24	
7481.00	47.79	3.39	7444.41	164.29	-18.96	156.88	19.24	
7524.00	56.18	1.57	7470.87	198.10	-17.52	186.91	19.78	
7566.00	64.00	358.49	7491.80	234.47	-17.54	219.87	19.69	
7609.00	72.21	355.32	7507.82	274.27	-19.72	256.86	20.27	
7651.00	81.27	352.23	7517.45	314.86	-24.17	295.52	22.72	
7738.00	91.08	346.57	7523.25	400.04	-40.13	379.45	13.01	
7822.00	91.92	349.20	7521.04	482.14	-57.75	461.29	3.29	
7906.00	92.55	349.99	7517.76	564.69	-72.92	542.51	1.20	
7992.00	91.71	352.65	7514.56	649.64	-85.89	624.97	3.25	
8077.00	91.08	353.45	7512.49	733.99	-96.17	705.74	1.19	
8162.00	90.87	352.73	7511.04	818.36	-106.39	786.52	0.88	
8248.00	90.24	355.01	7510.20	903.85	-115.57	867.87	2.75	
8334.00	89.20	355.17	7510.62	989.54	-122.93	948.62	1.23	
8419.00	91.43	355.06	7510.15	1074.22	-130.16	1028.41	2.63	
8504.00	91.36	353.98	7508.08	1158.81	-138.28	1108.48	1.28	
8589.00	88.64	353.12	7508.08	1243.26	-147.83	1189.05	3.36	
8675.00	88.22	353.16	7510.44	1328.61	-158.10	1270.73	0.49	
8760.00	88.29	352.43	7513.03	1412.90	-168.75	1351.61	0.87	
8845.00	88.50	353.22	7515.42	1497.20	-179.87	1432.88	0.96	

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Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		Vsect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
8930.00	89.97	352.46	7516.55	1581.53	-189.96	1513.37	1.94
9015.00	89.26	352.23	7517.13	1665.77	-201.29	1594.49	0.87
9100.00	90.31	353.22	7517.44	1750.08	-212.06	1675.44	1.70
9186.00	91.71	351.57	7515.92	1835.31	-223.43	1757.48	2.51
9271.00	91.64	345.92	7513.43	1918.60	-240.01	1839.96	6.65
9356.00	90.38	339.23	7511.92	1999.64	-265.45	1924.15	8.00
9441.00	90.31	338.40	7511.40	2078.89	-296.17	2008.96	0.99
9526.00	89.41	338.14	7511.61	2157.85	-327.64	2093.82	1.11
9611.00	89.76	335.46	7512.23	2235.96	-361.13	2178.77	3.18
9697.00	91.22	333.81	7511.50	2313.66	-397.97	2264.76	2.56
9782.00	91.29	331.96	7509.63	2389.30	-436.69	2349.68	2.18
9867.00	90.31	329.51	7508.44	2463.44	-478.23	2434.43	3.10
9953.00	88.99	327.93	7508.96	2536.94	-522.88	2519.91	2.41
10038.00	88.78	327.16	7510.62	2608.65	-568.49	2604.18	0.93
10123.00	89.34	326.90	7512.02	2679.95	-614.74	2688.36	0.72
10208.00	89.90	326.40	7512.59	2750.95	-661.46	2772.46	0.89
10293.00	93.61	326.49	7509.99	2821.74	-708.42	2856.46	4.37
10378.00	94.72	327.14	7503.82	2892.69	-754.82	2940.38	1.52
10463.00	93.18	325.79	7497.96	2963.36	-801.66	3024.24	2.41
10548.00	89.55	324.71	7495.94	3033.17	-850.09	3107.98	4.46
10633.00	91.36	324.81	7495.27	3102.59	-899.14	3191.63	2.14
10719.00	88.57	324.19	7495.32	3172.59	-949.08	3276.19	3.33
10804.00	88.29	324.02	7497.65	3241.42	-998.90	3359.63	0.39
10889.00	88.35	323.52	7500.14	3309.95	-1049.11	3442.98	0.59
10975.00	89.48	323.94	7501.77	3379.28	-1099.98	3527.31	1.39
11061.00	91.15	324.41	7501.30	3449.00	-1150.32	3611.78	2.03
11146.00	91.92	324.41	7499.02	3518.09	-1199.77	3695.31	0.90
11231.00	91.78	325.64	7496.27	3587.70	-1248.47	3778.99	1.46
11316.00	91.36	324.92	7493.93	3657.54	-1296.86	3862.74	0.98
11401.00	89.48	324.65	7493.31	3726.98	-1345.87	3946.40	2.24
11487.00	90.10	324.56	7493.63	3797.09	-1395.69	4030.99	0.74
11572.00	90.17	324.74	7493.42	3866.42	-1444.87	4114.62	0.23
11657.00	90.03	325.10	7493.26	3935.97	-1493.72	4198.31	0.45
11742.00	90.31	325.44	7493.00	4005.83	-1542.14	4282.10	0.52
11828.00	89.13	325.05	7493.42	4076.49	-1591.17	4366.86	1.46
11913.00	90.52	326.16	7493.68	4146.62	-1639.18	4450.72	2.10
11998.00	89.27	326.09	7493.84	4217.19	-1686.56	4534.71	1.48
12083.00	89.69	325.78	7494.62	4287.60	-1734.17	4618.65	0.61
12168.00	89.90	326.50	7494.93	4358.18	-1781.53	4702.64	0.89
12253.00	89.13	326.23	7495.65	4428.95	-1828.61	4786.68	0.96
12338.00	88.99	326.38	7497.05	4499.66	-1875.76	4870.70	0.25
12424.00	90.24	327.09	7497.63	4571.56	-1922.93	4955.81	1.68
12509.00	88.85	327.14	7498.30	4642.94	-1969.08	5040.01	1.64
12594.00	90.24	327.19	7498.98	4714.35	-2015.17	5124.21	1.64
12679.00	89.62	327.20	7499.08	4785.80	-2061.22	5208.43	0.74
12765.00	91.29	328.18	7498.40	4858.48	-2107.18	5293.73	2.26
12850.00	88.22	326.36	7498.76	4929.97	-2153.13	5377.95	4.20
12936.00	90.03	326.77	7500.07	5001.73	-2200.50	5463.01	2.17
13021.00	90.24	325.87	7499.87	5072.46	-2247.64	5547.05	1.08
13106.00	88.85	324.43	7500.54	5142.21	-2296.21	5630.79	2.36

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Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
13191.00	89.48	324.79	7501.78	5211.49	-2345.43	5714.40	0.85
13276.00	89.34	323.25	7502.66	5280.27	-2395.37	5797.84	1.82
13361.00	93.46	324.26	7500.59	5348.78	-2445.60	5881.18	5.00
13446.00	94.44	324.53	7494.73	5417.73	-2494.97	5964.53	1.19
13532.00	95.43	325.04	7487.34	5487.73	-2544.38	6048.86	1.30
13617.00	96.27	327.37	7478.68	5557.99	-2591.41	6132.43	2.90
13660.00	94.65	326.89	7474.59	5593.94	-2614.64	6174.83	3.91
13703.00	93.95	328.08	7471.36	5630.10	-2637.69	6217.34	3.23
13745.00	94.17	327.51	7468.39	5665.55	-2660.01	6258.91	1.46
13787.00	93.04	328.06	7465.75	5701.01	-2682.36	6300.49	2.98
13830.00	91.78	327.99	7463.94	5737.45	-2705.11	6343.14	2.94
13873.00	91.43	327.82	7462.73	5773.87	-2727.95	6385.80	0.90
13915.00	90.38	327.35	7462.07	5809.32	-2750.46	6427.44	2.74
13958.00	87.59	326.88	7462.83	5845.42	-2773.80	6470.03	6.59
14001.00	86.75	327.07	7464.95	5881.43	-2797.20	6512.56	2.01
14043.00	86.82	328.04	7467.31	5916.82	-2819.70	6554.14	2.31
14086.00	87.45	327.55	7469.46	5953.16	-2842.59	6596.75	1.86
14129.00	87.45	327.41	7471.37	5989.38	-2865.68	6639.34	0.32
14171.00	87.52	327.03	7473.21	6024.65	-2888.40	6680.92	0.92
14214.00	87.73	326.69	7475.00	6060.62	-2911.89	6723.45	0.93
14299.00	87.87	326.88	7478.26	6131.68	-2958.42	6807.52	0.28
14384.00	88.08	328.58	7481.27	6203.51	-3003.77	6891.79	2.01
14469.00	87.66	328.08	7484.43	6275.80	-3048.37	6976.16	0.76
14554.00	89.27	326.46	7486.71	6347.27	-3094.31	7060.36	2.69
14640.00	89.27	326.64	7487.82	6419.02	-3141.71	7145.42	0.21
14725.00	89.83	327.57	7488.49	6490.38	-3187.88	7229.62	1.28
14810.00	89.97	326.67	7488.65	6561.76	-3234.03	7313.82	1.07
14896.00	89.83	327.13	7488.80	6633.81	-3280.99	7398.97	0.56
14981.00	89.90	326.16	7489.01	6704.81	-3327.72	7483.07	1.14
15066.00	89.55	325.31	7489.43	6775.06	-3375.58	7566.97	1.08
15152.00	89.97	324.24	7489.79	6845.31	-3425.18	7651.61	1.34
15237.00	90.66	324.42	7489.33	6914.36	-3474.75	7735.14	0.85
15322.00	90.66	323.97	7488.34	6983.28	-3524.47	7818.64	0.53
15408.00	91.08	323.64	7487.03	7052.68	-3575.25	7903.00	0.62
15493.00	91.01	324.08	7485.47	7121.31	-3625.37	7986.39	0.52
15562.00	91.36	324.42	7484.04	7177.30	-3665.68	8054.17	0.71

Vertical Section is 8113.19 ft along the target direction of 334.97 deg at a measured depth of 15622.05 ft.  
Horizontal Displacement is 8118.58 ft along the well bore azimuth of 332.88 deg.  
The total correction is -8.62 deg relative to Grid North.

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MORGANTOWN, WV