

9-00121



Weatherford[®]

SURVEY REPORT

Report Date: 5/29/2012
 Customer: Chesapeake
 Job Name: 4026310
 Well Name: Alan Degarmo BRK 8H
 Field: Brooke County
 Rig: Nomac 37
 Rig Loc: Brooke County

Survey Calculation Method: Minimum Curvature						
Magnetic Reference	Target Direction	Total Magnetic Field	Magnetic Dip Angle	Magnetic Declination	Grid Convergence	Total Correction
Grid North	157.62 deg	53170 nT	68.23 deg	-8.77 deg	-0.68 deg	-8.09 deg
Survey Tie-On	Depth	INC	AZ	TVD	NS	EW
	5301.00 ft	0.66 deg	91.21 deg	5300.68 ft	38.50 ft	-20.83 ft

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head			Vsect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)			
5307.00	0.63	123.76	5306.68	38.48	-20.77	-43.49	6.04	
5338.00	2.54	152.71	5337.67	37.78	-20.31	-42.66	6.49	
5369.00	6.08	157.94	5368.57	35.64	-19.38	-40.34	11.48	
5399.00	9.90	159.90	5398.28	31.75	-17.90	-36.17	12.76	
5430.00	13.25	158.90	5428.64	25.93	-15.70	-29.95	10.83	
5461.00	15.80	157.01	5458.65	18.73	-12.77	-22.18	8.37	
5493.00	18.36	156.15	5489.24	10.11	-9.03	-12.78	8.04	
5525.00	20.67	155.02	5519.40	0.38	-4.61	-2.10	7.31	
5556.00	23.03	154.80	5548.17	-10.07	0.28	9.42	7.62	
5587.00	25.93	153.64	5576.38	-21.63	5.88	22.24	9.48	
5618.00	28.62	152.62	5603.93	-34.30	12.30	36.40	8.81	
5648.00	31.44	151.65	5629.90	-47.57	19.32	51.34	9.54	
5680.00	33.38	152.48	5656.91	-62.72	27.35	68.41	6.22	
5710.00	36.47	153.42	5681.51	-78.02	35.16	85.53	10.45	
5742.00	39.42	155.35	5706.74	-95.76	43.65	105.17	9.94	
5774.00	43.12	155.98	5730.79	-114.99	52.35	126.26	11.64	
5804.00	46.76	155.72	5752.02	-134.33	61.02	147.44	12.15	
5836.00	50.58	155.53	5773.15	-156.21	70.93	171.45	11.95	
5867.00	54.25	155.61	5792.05	-178.57	81.09	196.00	11.84	
5897.00	57.98	155.73	5808.78	-201.26	91.35	220.88	12.44	
5928.00	61.37	155.84	5824.43	-225.66	102.32	247.62	10.94	
5960.00	65.34	157.19	5838.77	-251.89	113.71	276.21	12.97	
5991.00	69.29	157.46	5850.73	-278.28	124.73	304.81	12.77	
6023.00	72.98	158.52	5861.07	-306.35	136.08	335.08	11.95	
6054.00	76.03	158.35	5869.35	-334.13	147.06	364.95	9.85	
6086.00	78.10	158.55	5876.52	-363.13	158.51	396.13	6.50	
6117.00	80.53	158.86	5882.26	-391.51	169.57	426.59	7.90	
6149.00	83.98	158.33	5886.58	-421.03	181.14	458.29	10.91	
6181.00	85.17	158.36	5889.60	-450.64	192.90	490.14	3.72	
6213.00	87.35	156.98	5891.69	-480.17	205.03	522.07	8.06	
6245.00	89.58	156.51	5892.55	-509.56	217.66	554.05	7.12	
6308.00	91.19	156.42	5892.12	-567.32	242.82	617.04	2.56	
6435.00	90.98	158.26	5889.72	-684.49	291.73	744.01	1.46	
6562.00	89.37	158.84	5889.33	-802.68	338.12	870.98	1.35	
6688.00	89.58	157.38	5890.48	-919.59	385.15	996.97	1.17	

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9-00121

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
6814.00	87.76	156.41	5893.41	-1035.45	434.57	1122.92	1.64
6940.00	89.09	156.13	5896.87	-1150.75	485.26	1248.83	1.08
7068.00	89.65	156.16	5898.28	-1267.81	537.02	1376.78	0.44
7195.00	88.67	155.72	5900.14	-1383.76	588.79	1503.71	0.85
7322.00	86.85	156.81	5905.10	-1499.92	639.87	1630.57	1.67
7448.00	87.69	157.54	5911.11	-1615.92	688.69	1756.42	0.88
7574.00	87.69	158.61	5916.18	-1732.71	735.70	1882.32	0.85
7700.00	88.39	158.24	5920.49	-1849.81	782.01	2008.23	0.63
7826.00	89.37	158.28	5922.96	-1966.83	828.67	2134.20	0.78
7952.00	88.39	159.20	5925.42	-2084.23	874.34	2260.15	1.07
8080.00	88.88	158.13	5928.47	-2203.42	920.90	2388.09	0.92
8205.00	87.69	158.85	5932.21	-2319.66	966.71	2513.01	1.11
8332.00	89.09	159.71	5935.78	-2438.39	1011.62	2639.90	1.29
8458.00	88.88	159.78	5938.01	-2556.58	1055.24	2765.80	0.18
8585.00	90.00	158.79	5939.25	-2675.36	1100.16	2892.73	1.18
8712.00	90.14	158.73	5939.10	-2793.74	1146.17	3019.71	0.12
8839.00	89.93	157.90	5939.02	-2911.75	1193.09	3146.70	0.67
8966.00	89.30	157.49	5939.87	-3029.24	1241.29	3273.69	0.59
9093.00	89.37	157.09	5941.35	-3146.39	1290.32	3400.68	0.32
9219.00	89.72	154.24	5942.35	-3261.18	1342.23	3526.59	2.28
9346.00	89.02	155.35	5943.74	-3376.07	1396.31	3653.43	1.03
9474.00	87.69	156.96	5947.42	-3493.09	1448.03	3781.33	1.63
9599.00	88.18	157.75	5951.92	-3608.38	1496.13	3906.24	0.74
9726.00	89.02	157.84	5955.02	-3725.93	1544.11	4033.20	0.67
9851.00	88.11	158.47	5958.15	-3841.91	1590.61	4158.16	0.89
9978.00	87.42	157.26	5963.11	-3959.46	1638.42	4285.06	1.10
10105.00	86.99	156.78	5969.30	-4076.24	1687.95	4411.90	0.51
10232.00	86.64	157.11	5976.36	-4192.92	1737.60	4538.69	0.38
10359.00	87.62	157.00	5982.72	-4309.72	1787.05	4665.52	0.78
10486.00	88.53	156.98	5986.98	-4426.55	1836.67	4792.44	0.72
10613.00	88.32	157.29	5990.47	-4543.53	1886.00	4919.39	0.29
10740.00	88.25	157.74	5994.27	-4660.82	1934.54	5046.33	0.36
10865.00	89.16	158.24	5997.10	-4776.68	1981.38	5171.30	0.83
10992.00	89.37	158.38	5998.73	-4894.68	2028.31	5298.28	0.20
11117.00	88.60	157.70	6000.94	-5010.59	2075.05	5423.25	0.82
11244.00	88.32	157.24	6004.35	-5127.85	2123.69	5550.21	0.42
11370.00	89.93	158.59	6006.28	-5244.59	2171.06	5676.18	1.67
11498.00	89.79	158.49	6006.59	-5363.71	2217.89	5804.17	0.13
11625.00	90.35	158.46	6006.44	-5481.85	2264.48	5931.15	0.44
11753.00	89.58	157.04	6006.51	-5600.32	2312.95	6059.15	1.26
11879.00	89.02	156.16	6008.05	-5715.95	2362.98	6185.12	0.83
12005.00	87.76	157.08	6011.59	-5831.55	2412.96	6311.04	1.24
12131.00	87.27	159.19	6017.06	-5948.37	2459.84	6436.91	1.72
12234.00	87.69	158.56	6021.59	-6044.35	2496.93	6539.79	0.73

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Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		Vsect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		

Vertical Section is 6598.74 ft along the target direction of 157.62 deg at a measured depth of 12293.01 ft.
Horizontal Displacement is 6598.74 ft along the well bore azimuth of 157.56 deg.
The total correction is -8.09 deg relative to Grid North.
