



Weatherford®

SURVEY REPORT

Report Date: **5/2/2013**
 Customer: **Anadarko**
 Job Name: **4029177**
 Well Name: **Cannon 34C-10HZ**

Field: **Wattenburg**
 Rig: **Xtreme 23**
 Rig Loc: **Weld County**

Survey Calculation Method: Minimum Curvature						
Magnetic Reference	Target Direction	Total Magnetic Field	Magnetic Dip Angle	Magnetic Declination	Grid Convergence	Total Correction
True North	179.64 deg	52716 nT	66.77 deg	8.65 deg	0.00 deg	8.65 deg
Survey Tie-On	Depth	INC	AZ	TVD	NS	EW
	896.00 ft	0.23 deg	357.05 deg	895.99 ft	-0.25 ft	-1.96 ft

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head			
				NS (ft)	EW (ft)	Vsect (ft)	Dogleg (deg/100ft)
1004.00	0.41	288.45	1003.99	0.09	-2.34	-0.10	0.36
1066.00	0.70	290.18	1065.99	0.29	-2.90	-0.31	0.47
1158.00	2.83	300.60	1157.94	1.64	-5.39	-1.67	2.33
1248.00	4.52	293.07	1247.75	4.16	-10.56	-4.23	1.95
1339.00	6.17	287.57	1338.35	7.04	-18.52	-7.16	1.90
1429.00	8.13	287.42	1427.65	10.41	-29.21	-10.59	2.18
1526.00	9.45	285.79	1523.51	14.63	-43.41	-14.90	1.38
1619.00	11.05	285.72	1615.02	19.12	-59.34	-19.49	1.72
1713.00	11.13	279.92	1707.27	23.12	-76.95	-23.61	1.19
1805.00	11.17	279.52	1797.53	26.13	-94.49	-26.72	0.09
1899.00	11.69	282.75	1889.67	29.74	-112.75	-30.44	0.88
1991.00	13.02	284.51	1979.53	34.39	-131.88	-35.22	1.50
2085.00	13.66	284.12	2071.00	39.75	-152.89	-40.71	0.69
2177.00	12.05	283.27	2160.69	44.60	-172.78	-45.69	1.76
2271.00	11.42	283.57	2252.72	49.04	-191.37	-50.24	0.67
2363.00	11.60	290.48	2342.88	54.41	-208.89	-55.73	1.51
2455.00	12.64	292.13	2432.83	61.44	-226.88	-62.87	1.19
2548.00	13.39	286.32	2523.44	68.30	-246.64	-69.85	1.62
2641.00	13.24	285.89	2613.94	74.24	-267.22	-75.92	0.19
2734.00	13.22	283.55	2704.47	79.65	-287.80	-81.46	0.58
2826.00	13.65	280.89	2793.95	84.17	-308.69	-86.10	0.82
2912.00	13.77	282.37	2877.50	88.28	-328.65	-90.34	0.43
2997.00	12.57	281.95	2960.27	92.36	-347.58	-94.54	1.42
3082.00	12.10	288.09	3043.31	97.04	-365.10	-99.33	1.64
3168.00	13.77	287.08	3127.12	102.85	-383.45	-105.25	1.96
3253.00	11.49	285.59	3210.06	108.09	-401.28	-110.61	2.71
3339.00	11.52	289.98	3294.34	113.33	-417.60	-115.95	1.02
3424.00	12.27	290.41	3377.51	119.38	-434.04	-122.10	0.89
3510.00	13.66	293.22	3461.32	126.57	-451.94	-129.41	1.77
3595.00	13.76	287.81	3543.90	133.62	-470.79	-136.58	1.51
3681.00	13.94	290.67	3627.40	140.40	-490.22	-143.48	0.82
3766.00	14.43	292.05	3709.81	147.99	-509.62	-151.19	0.70
3851.00	14.35	285.26	3792.15	154.74	-529.60	-158.07	1.99
3937.00	14.43	284.66	3875.45	160.26	-550.25	-163.71	0.20
4022.00	15.12	281.78	3957.64	165.20	-571.34	-168.79	1.19

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		Vsect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
4108.00	14.36	284.41	4040.81	170.15	-592.65	-173.87	1.18
4193.00	15.96	283.59	4122.85	175.52	-614.22	-179.37	1.90
4279.00	17.67	282.65	4205.17	181.15	-638.45	-185.16	2.01
4364.00	14.66	276.32	4286.80	185.16	-661.74	-189.32	4.10
4450.00	13.38	278.36	4370.24	187.81	-682.40	-192.09	1.60
4535.00	12.90	285.59	4453.02	191.79	-701.27	-196.19	2.01
4620.00	13.47	288.43	4535.78	197.47	-719.80	-201.99	1.01
4705.00	14.05	287.76	4618.34	203.75	-739.02	-208.39	0.71
4791.00	15.61	284.45	4701.47	209.82	-760.17	-214.59	2.06
4876.00	16.72	282.53	4783.11	215.33	-783.18	-220.24	1.45
4961.00	15.36	280.39	4864.80	220.01	-806.19	-225.07	1.74
5047.00	14.27	280.93	4947.94	224.07	-827.80	-229.27	1.28
5132.00	13.32	285.78	5030.49	228.72	-847.51	-234.04	1.76
5217.00	14.81	288.40	5112.94	234.81	-867.24	-240.26	1.91
5303.00	15.01	286.38	5196.05	241.42	-888.36	-247.00	0.65
5388.00	15.03	283.00	5278.15	247.01	-909.66	-252.72	1.03
5474.00	14.74	280.94	5361.26	251.59	-931.26	-257.44	0.70
5559.00	14.89	281.22	5443.43	255.77	-952.59	-261.75	0.20
5645.00	15.49	282.81	5526.43	260.47	-974.63	-266.58	0.85
5730.00	12.42	281.04	5608.91	264.73	-994.67	-270.98	3.65
5816.00	11.93	281.74	5692.98	268.31	-1012.45	-274.67	0.60
5901.00	12.14	282.13	5776.11	271.98	-1029.79	-278.44	0.26
5986.00	10.59	284.36	5859.44	275.79	-1046.10	-282.36	1.90
6071.00	10.38	286.68	5943.02	279.93	-1061.00	-286.59	0.55
6157.00	9.10	291.04	6027.78	284.60	-1074.77	-291.34	1.72
6242.00	6.87	283.87	6111.95	288.23	-1085.98	-295.05	2.87
6328.00	6.61	284.10	6197.36	290.67	-1095.78	-297.55	0.30
6413.00	4.91	279.33	6281.93	292.45	-1104.11	-299.38	2.08
6499.00	3.36	269.34	6367.70	293.02	-1110.26	-299.99	1.98
6584.00	1.83	263.05	6452.61	292.82	-1114.10	-299.82	1.83
6669.00	1.39	263.60	6537.58	292.54	-1116.47	-299.55	0.52
6754.00	0.97	263.00	6622.56	292.34	-1118.21	-299.36	0.49
6865.00	0.45	163.04	6733.55	291.81	-1119.02	-298.84	1.02
7003.00	10.22	190.10	6870.79	279.21	-1121.01	-286.25	7.12
7088.00	17.26	190.80	6953.31	259.37	-1124.70	-266.43	8.28
7173.00	23.17	194.95	7033.04	230.80	-1131.38	-237.91	7.15
7216.00	26.06	190.86	7072.13	213.35	-1135.35	-220.48	7.80
7259.00	27.39	184.08	7110.55	194.20	-1137.83	-201.35	7.73
7302.00	31.36	185.03	7148.01	173.18	-1139.52	-180.34	9.30
7344.00	35.39	184.50	7183.08	150.16	-1141.43	-157.33	9.62
7387.00	39.74	184.45	7217.15	124.03	-1143.47	-131.21	10.12
7430.00	45.13	182.23	7248.88	95.08	-1145.13	-102.27	13.01
7472.00	49.65	178.51	7277.31	64.19	-1145.30	-71.38	12.58
7515.00	53.64	176.82	7303.99	30.50	-1143.91	-37.69	9.78
7558.00	59.21	176.58	7327.76	-5.25	-1141.85	-1.93	12.96
7600.00	64.98	177.27	7347.41	-42.30	-1139.86	35.13	13.81
7643.00	70.33	178.95	7363.75	-82.03	-1138.56	74.87	12.96
7686.00	73.65	179.96	7377.05	-122.91	-1138.18	115.76	8.04
7748.00	80.88	182.40	7390.71	-183.33	-1139.44	176.17	12.28
7840.00	89.26	184.20	7398.61	-274.75	-1144.72	267.55	9.31

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		Vsect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
7925.00	90.55	184.20	7398.75	-359.52	-1150.94	352.28	1.52
8010.00	91.91	181.85	7396.92	-444.38	-1155.43	437.11	3.19
8095.00	92.22	179.46	7393.86	-529.31	-1156.40	522.03	2.83
8181.00	91.17	178.21	7391.32	-615.25	-1154.65	607.98	1.90
8266.00	90.00	177.45	7390.45	-700.18	-1151.43	692.93	1.64
8351.00	90.06	176.50	7390.40	-785.06	-1146.95	777.84	1.12
8437.00	90.06	177.13	7390.31	-870.93	-1142.17	863.74	0.73
8522.00	88.95	176.02	7391.05	-955.77	-1137.09	948.61	1.85
8607.00	89.75	176.63	7392.01	-1040.59	-1131.64	1033.46	1.18
8693.00	89.44	177.42	7392.62	-1126.47	-1127.18	1119.37	0.99
8779.00	89.26	178.18	7393.60	-1212.40	-1123.88	1205.32	0.91
8864.00	88.68	176.84	7395.12	-1297.31	-1120.19	1290.24	1.72
8950.00	88.34	177.72	7397.36	-1383.18	-1116.11	1376.14	1.10
9035.00	89.82	179.26	7398.73	-1468.13	-1113.87	1461.11	2.51
9121.00	90.06	179.05	7398.82	-1554.13	-1112.60	1547.10	0.37
9206.00	89.91	178.95	7398.84	-1639.11	-1111.12	1632.10	0.21
9291.00	89.20	177.95	7399.50	-1724.08	-1108.82	1717.08	1.44
9376.00	89.57	177.49	7400.41	-1809.00	-1105.44	1802.02	0.69
9462.00	90.12	178.03	7400.64	-1894.94	-1102.08	1887.98	0.90
9547.00	89.88	178.03	7400.64	-1979.89	-1099.15	1972.94	0.28
9632.00	89.14	178.19	7401.37	-2064.84	-1096.35	2057.91	0.89
9718.00	89.51	178.53	7402.38	-2150.80	-1093.89	2143.88	0.58
9803.00	89.57	177.59	7403.07	-2235.74	-1091.01	2228.84	1.11
9889.00	90.68	176.67	7402.88	-2321.63	-1086.71	2314.76	1.68
9974.00	91.11	176.63	7401.55	-2406.48	-1081.74	2399.63	0.51
10059.00	90.18	175.23	7400.59	-2491.25	-1075.71	2484.45	1.98
10144.00	89.32	177.64	7400.96	-2576.08	-1070.42	2569.31	3.01
10230.00	90.12	177.39	7401.38	-2662.00	-1066.69	2655.24	0.97
10315.00	90.25	179.09	7401.11	-2746.96	-1064.08	2740.22	2.01
10401.00	90.43	180.47	7400.60	-2832.95	-1063.75	2826.21	1.62
10486.00	90.12	180.57	7400.19	-2917.95	-1064.52	2911.20	0.38
10571.00	89.26	181.79	7400.65	-3002.93	-1066.28	2996.17	1.76
10657.00	90.18	184.01	7401.07	-3088.81	-1070.63	3082.02	2.79
10742.00	89.63	184.69	7401.21	-3173.56	-1077.07	3166.73	1.03
10828.00	89.81	183.16	7401.63	-3259.36	-1082.96	3252.49	1.79
10913.00	89.38	181.59	7402.23	-3344.28	-1086.48	3337.39	1.92
10998.00	88.83	179.88	7403.56	-3429.26	-1087.57	3422.36	2.11
11084.00	88.34	179.11	7405.69	-3515.23	-1086.81	3508.33	1.06
11169.00	88.21	177.76	7408.24	-3600.15	-1084.49	3593.27	1.59
11254.00	88.77	178.67	7410.48	-3685.08	-1081.85	3678.21	1.26
11340.00	90.99	180.37	7410.66	-3771.07	-1081.13	3764.20	3.25
11425.00	88.09	179.09	7411.35	-3856.06	-1080.73	3849.19	3.73
11511.00	86.55	179.72	7415.37	-3941.95	-1079.83	3935.09	1.93
11596.00	87.16	179.51	7420.03	-4026.82	-1079.26	4019.96	0.76
11681.00	87.10	179.88	7424.29	-4111.72	-1078.81	4104.86	0.44
11767.00	89.51	180.28	7426.83	-4197.67	-1078.93	4190.81	2.84
11853.00	89.26	178.78	7427.75	-4283.66	-1078.23	4276.80	1.77
11938.00	90.80	179.76	7427.71	-4368.65	-1077.14	4361.80	2.15
11947.00	90.99	179.77	7427.57	-4377.65	-1077.11	4370.80	2.11
12001.00	90.99	179.77	7426.64	-4431.64	-1076.89	4424.79	0.00

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

Weatherford Surveys from 1004 ft MD to 11947 ft MD.

TD at 12001 ft MD.

The total correction is 8.65 deg relative to True North.
