



Weatherford®

SURVEY REPORT

Report Date: **7/30/2013**
 Customer: **Anadarko**
 Job Name: **4029899**
 Well Name: **Farley 29C-23HZ**

Field: **Wattenberg 90750**
 Rig: **Xtreme 23**
 Rig Loc: **Farley 13-23HZ**

Survey Calculation Method: Minimum Curvature						
Magnetic Reference	Target Direction	Total Magnetic Field	Magnetic Dip Angle	Magnetic Declination	Grid Convergence	Total Correction
True North	359.94 deg	52741 nT	66.81 deg	8.59 deg	0.00 deg	8.59 deg
Survey Tie-On	Depth	INC	AZ	TVD	NS	EW
	953.00 ft	1.10 deg	9.30 deg	952.94 ft	7.47 ft	-1.51 ft

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head			
				NS (ft)	EW (ft)	Vsect (ft)	Dogleg (deg/100ft)
1072.00	1.53	39.03	1071.91	9.83	-0.32	9.83	0.67
1163.00	0.21	209.94	1162.90	10.63	0.36	10.63	1.91
1253.00	1.68	142.97	1252.89	9.43	1.07	9.43	1.79
1343.00	3.68	129.52	1342.78	6.54	4.09	6.54	2.31
1435.00	5.99	135.34	1434.45	1.25	9.74	1.24	2.56
1527.00	6.67	142.21	1525.89	-6.39	16.39	-6.41	1.11
1617.00	8.17	142.86	1615.13	-15.62	23.46	-15.64	1.67
1707.00	9.28	140.63	1704.09	-26.32	31.92	-26.36	1.29
1798.00	10.96	138.23	1793.67	-38.45	42.34	-38.49	1.90
1888.00	13.20	142.90	1881.68	-53.03	54.24	-53.09	2.71
1979.00	14.33	138.99	1970.06	-69.81	67.90	-69.89	1.61
2069.00	14.75	142.82	2057.18	-87.35	82.13	-87.43	1.17
2159.00	16.87	141.18	2143.77	-106.65	97.24	-106.75	2.41
2250.00	17.50	139.58	2230.71	-127.36	114.39	-127.48	0.87
2341.00	18.85	143.11	2317.17	-149.53	132.09	-149.67	1.91
2436.00	18.86	146.72	2407.08	-174.64	149.73	-174.80	1.23
2621.00	20.26	140.23	2581.42	-224.27	186.63	-224.47	1.40
2715.00	19.98	140.88	2669.68	-249.24	207.17	-249.46	0.38
2808.00	21.30	142.08	2756.71	-274.89	227.58	-275.13	1.49
2900.00	21.74	143.63	2842.30	-301.79	247.95	-302.05	0.78
2993.00	22.22	143.36	2928.54	-329.77	268.66	-330.05	0.53
3087.00	22.00	141.96	3015.63	-357.90	290.12	-358.20	0.61
3180.00	21.59	140.85	3101.98	-384.89	311.65	-385.21	0.63
3357.00	17.76	137.41	3268.62	-430.03	350.50	-430.40	2.26
3442.00	14.55	135.59	3350.25	-447.21	366.75	-447.59	3.82
3613.00	9.34	145.58	3517.51	-474.02	389.64	-474.43	3.27
3698.00	8.58	147.58	3601.47	-485.06	396.94	-485.48	0.97
3869.00	3.36	171.01	3771.51	-500.79	404.57	-501.22	3.31
4040.00	1.39	175.21	3942.35	-507.81	405.52	-508.24	1.16
4211.00	0.56	172.23	4113.32	-510.71	405.81	-511.13	0.49
4388.00	0.43	131.53	4290.32	-512.00	406.42	-512.43	0.21
4559.00	2.33	85.15	4461.26	-512.14	410.37	-512.56	1.20
4730.00	0.88	95.33	4632.19	-511.96	415.14	-512.40	0.86
4901.00	0.92	230.94	4803.18	-512.95	415.38	-513.39	0.97
5072.00	0.63	168.28	4974.17	-514.74	414.51	-515.17	0.49

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
5243.00	0.99	251.67	5145.16	-516.12	413.29	-516.55	0.65
5414.00	0.45	287.10	5316.14	-516.39	411.25	-516.82	0.40
5585.00	0.77	349.32	5487.14	-515.06	410.40	-515.49	0.40
5755.00	0.73	15.22	5657.12	-512.89	410.47	-513.32	0.20
5926.00	0.73	17.69	5828.11	-510.81	411.09	-511.24	0.02
6097.00	0.64	49.85	5999.10	-509.15	412.15	-509.58	0.23
6267.00	0.47	39.58	6169.09	-508.00	413.32	-508.43	0.12
6438.00	0.35	85.37	6340.08	-507.42	414.28	-507.85	0.20
6609.00	0.42	16.66	6511.08	-506.78	414.98	-507.21	0.26
6780.00	0.31	343.81	6682.08	-505.73	415.03	-506.17	0.14
6865.00	0.22	216.75	6767.08	-505.64	414.87	-506.08	0.56
6951.00	3.79	350.63	6853.02	-502.97	414.31	-503.40	4.59
7036.00	10.60	8.18	6937.31	-492.45	414.97	-492.88	8.33
7121.00	17.34	7.14	7019.74	-472.12	417.66	-472.55	7.93
7207.00	26.29	3.36	7099.51	-440.32	420.37	-440.76	10.53
7292.00	35.99	358.94	7172.18	-396.45	421.01	-396.89	11.72
7378.00	46.07	356.69	7236.98	-340.12	418.75	-340.56	11.84
7464.00	55.42	356.99	7291.34	-273.70	415.10	-274.13	10.88
7549.00	66.10	358.03	7332.80	-199.71	411.92	-200.14	12.61
7635.00	73.63	0.07	7362.38	-119.04	410.61	-119.47	9.03
7715.00	82.78	358.41	7378.72	-40.82	409.56	-41.25	11.62
7865.00	92.73	356.95	7384.59	108.75	403.49	108.33	6.70
7934.00	91.85	357.66	7381.83	177.62	400.25	177.20	1.64
8036.00	90.62	357.72	7379.63	279.51	396.14	279.09	1.21
8121.00	89.44	358.23	7379.59	364.45	393.13	364.04	1.51
8206.00	88.77	358.54	7380.92	449.41	390.74	449.00	0.87
8292.00	89.75	359.54	7382.03	535.39	389.30	534.98	1.63
8378.00	90.79	359.78	7381.62	621.38	388.79	620.98	1.24
8463.00	89.94	359.67	7381.08	706.38	388.38	705.97	1.01
8548.00	89.69	358.76	7381.35	791.37	387.22	790.97	1.11
8634.00	88.33	359.14	7382.84	877.34	385.64	876.94	1.64
8719.00	89.51	359.09	7384.44	962.32	384.33	961.91	1.39
8805.00	89.69	359.72	7385.04	1048.31	383.43	1047.91	0.76
8890.00	90.37	0.17	7385.00	1133.31	383.35	1132.91	0.96
8976.00	90.74	359.37	7384.17	1219.30	383.01	1218.90	1.02
9061.00	89.75	359.39	7383.80	1304.29	382.09	1303.89	1.16
9146.00	90.92	359.56	7383.31	1389.29	381.31	1388.89	1.39
9232.00	89.21	358.89	7383.21	1475.28	380.15	1474.88	2.14
9317.00	90.49	359.19	7383.43	1560.26	378.72	1559.87	1.55
9402.00	90.93	0.22	7382.38	1645.25	378.28	1644.86	1.32
9488.00	89.63	359.73	7381.96	1731.25	378.25	1730.85	1.62
9573.00	89.88	359.98	7382.32	1816.25	378.03	1815.85	0.42
9659.00	88.94	359.25	7383.21	1902.24	377.45	1901.84	1.38
9744.00	88.03	358.66	7385.45	1987.20	375.90	1986.80	1.28
9830.00	90.00	359.60	7386.93	2073.17	374.60	2072.77	2.54
9915.00	92.28	0.43	7385.24	2158.15	374.62	2157.75	2.85
10000.00	88.89	358.76	7384.37	2243.12	374.02	2242.73	4.45
10085.00	90.18	0.28	7385.06	2328.11	373.31	2327.72	2.35
10171.00	88.27	0.69	7386.23	2414.10	374.04	2413.70	2.27
10256.00	86.79	359.71	7389.89	2499.01	374.33	2498.62	2.09

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
10341.00	88.40	359.78	7393.46	2583.94	373.95	2583.54	1.90
10427.00	89.69	359.68	7394.89	2669.92	373.55	2669.53	1.50
10512.00	91.05	0.59	7394.34	2754.92	373.75	2754.52	1.93
10598.00	91.91	0.97	7392.12	2840.88	374.92	2840.49	1.09
10683.00	92.16	0.14	7389.10	2925.82	375.74	2925.43	1.02
10768.00	92.16	359.04	7385.90	3010.76	375.14	3010.36	1.29
10854.00	93.70	358.68	7381.50	3096.62	373.43	3096.23	1.84
10939.00	93.79	358.19	7375.95	3181.41	371.11	3181.02	0.58
11024.00	91.97	359.01	7371.68	3266.27	369.04	3265.89	2.35
11109.00	90.68	359.04	7369.71	3351.24	367.59	3350.85	1.52
11195.00	88.94	358.54	7370.00	3437.21	365.77	3436.83	2.11
11280.00	88.09	359.35	7372.20	3522.17	364.21	3521.79	1.38
11366.00	89.01	1.01	7374.38	3608.14	364.48	3607.75	2.21
11451.00	91.48	1.79	7374.01	3693.10	366.56	3692.72	3.05
11564.00	91.30	1.17	7371.27	3806.03	369.47	3805.64	0.57
11620.00	91.30	1.17	7370.00	3862.01	370.62	3861.62	0.00

Weatherford Survey from 1072 ft MD to 11564 ft MD.

TD at 11620 ft MD.

The total correction is 8.59 deg relative to True North.