



Weatherford®

SURVEY REPORT

Report Date: **7/19/2013**
 Customer: **Anadarko**
 Job Name: **4029898**
 Well Name: **Farley 30N-23HZ**

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	359.93 deg	52744 nT	66.81 deg	8.59 deg	0.00 deg	8.59 deg
Survey Tie-On	Depth	INC	AZ	TVD	NS	EW
	909.00 ft	0.18 deg	348.08 deg	909.00 ft	0.75 ft	-1.26 ft

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		Vsect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
1014.00	0.41	240.46	1014.00	0.73	-1.62	0.73	0.47
1075.00	0.53	226.00	1075.00	0.42	-2.01	0.43	0.28
1165.00	2.18	230.21	1164.97	-0.96	-3.63	-0.96	1.84
1256.00	3.56	220.11	1255.85	-4.23	-6.78	-4.22	1.61
1347.00	5.32	225.34	1346.58	-9.36	-11.60	-9.34	1.98
1439.00	6.33	223.29	1438.10	-16.05	-18.11	-16.02	1.12
1530.00	7.80	228.31	1528.41	-23.81	-26.16	-23.77	1.75
1620.00	9.66	229.16	1617.36	-32.81	-36.44	-32.76	2.07
1711.00	9.50	229.54	1707.09	-42.67	-47.93	-42.61	0.19
1801.00	10.09	218.96	1795.79	-53.62	-58.54	-53.55	2.10
1891.00	11.60	216.18	1884.18	-67.06	-68.84	-66.97	1.78
1981.00	12.16	214.44	1972.25	-82.18	-79.54	-82.08	0.74
2072.00	14.29	215.11	2060.83	-99.27	-91.42	-99.16	2.35
2164.00	15.22	217.57	2149.80	-118.13	-105.31	-118.01	1.22
2256.00	15.85	221.38	2238.44	-137.13	-120.98	-136.99	1.30
2347.00	17.60	224.26	2325.59	-156.31	-138.80	-156.14	2.13
2443.00	16.26	219.32	2417.43	-177.11	-157.45	-176.91	2.05
2536.00	16.96	225.60	2506.56	-196.67	-175.39	-196.46	2.07
2628.00	16.64	222.09	2594.63	-215.84	-193.81	-215.60	1.16
2721.00	16.33	222.11	2683.81	-235.42	-211.50	-235.16	0.33
2814.00	15.50	220.47	2773.24	-254.57	-228.33	-254.29	1.01
2907.00	16.95	227.17	2862.54	-273.24	-246.34	-272.94	2.54
3000.00	18.06	224.84	2951.24	-292.68	-266.45	-292.35	1.41
3092.00	18.41	228.19	3038.62	-312.48	-287.34	-312.13	1.20
3187.00	18.83	226.27	3128.65	-333.08	-309.60	-332.70	0.78
3279.00	16.51	219.52	3216.31	-353.43	-328.65	-353.03	3.36
3364.00	16.49	224.26	3297.81	-371.39	-344.75	-370.96	1.58
3449.00	14.85	227.98	3379.65	-387.32	-361.27	-386.88	2.26
3535.00	13.25	229.04	3463.08	-401.16	-376.90	-400.70	1.88
3620.00	11.64	230.23	3546.08	-413.03	-390.84	-412.55	1.92
3706.00	11.85	229.57	3630.28	-424.30	-404.23	-423.81	0.29
3791.00	10.09	231.63	3713.72	-434.59	-416.72	-434.08	2.12
3877.00	9.85	229.98	3798.42	-443.99	-428.26	-443.47	0.43
3962.00	8.57	221.87	3882.33	-453.39	-438.05	-452.85	2.14
4047.00	8.74	227.75	3966.36	-462.44	-447.06	-461.90	1.06

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		Vsect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
4133.00	8.40	226.06	4051.40	-471.20	-456.42	-470.64	0.49
4218.00	7.69	235.93	4135.57	-478.69	-465.60	-478.12	1.82
4304.00	4.63	247.65	4221.07	-483.24	-473.58	-482.66	3.83
4389.00	3.21	252.22	4305.87	-485.27	-479.02	-484.68	1.71
4474.00	2.25	257.71	4390.77	-486.35	-482.92	-485.76	1.17
4560.00	1.79	268.25	4476.71	-486.75	-485.91	-486.16	0.69
4645.00	1.61	273.31	4561.68	-486.72	-488.43	-486.12	0.28
4730.00	1.81	274.05	4646.64	-486.56	-490.96	-485.96	0.24
4816.00	0.38	186.15	4732.62	-486.74	-492.34	-486.14	2.13
4901.00	1.75	130.55	4817.61	-487.87	-491.39	-487.27	1.84
4987.00	1.75	121.39	4903.57	-489.41	-489.27	-488.81	0.32
5072.00	1.44	115.63	4988.54	-490.54	-487.20	-489.95	0.41
5157.00	1.02	110.56	5073.52	-491.27	-485.53	-490.68	0.51
5243.00	0.88	97.04	5159.50	-491.62	-484.15	-491.03	0.31
5328.00	0.93	109.33	5244.49	-491.93	-482.86	-491.34	0.24
5413.00	1.20	101.27	5329.48	-492.33	-481.33	-491.74	0.36
5498.00	1.20	99.22	5414.46	-492.65	-479.58	-492.06	0.05
5584.00	1.00	96.55	5500.44	-492.88	-477.95	-492.29	0.24
5669.00	0.76	63.89	5585.43	-492.72	-476.70	-492.13	0.64
5755.00	0.90	67.49	5671.43	-492.21	-475.57	-491.62	0.17
5840.00	0.14	156.69	5756.42	-492.05	-474.91	-491.47	1.07
6011.00	0.36	63.23	5927.42	-492.00	-474.35	-491.42	0.23
6096.00	0.53	42.54	6012.42	-491.59	-473.84	-491.01	0.27
6182.00	0.89	45.75	6098.41	-490.83	-473.09	-490.25	0.42
6267.00	0.31	272.42	6183.41	-490.36	-472.85	-489.78	1.32
6352.00	0.43	230.75	6268.41	-490.55	-473.33	-489.97	0.34
6438.00	0.28	217.76	6354.41	-490.92	-473.71	-490.34	0.20
6607.00	0.40	173.77	6523.40	-491.83	-473.90	-491.25	0.16
6695.00	1.19	2.95	6611.40	-491.22	-473.82	-490.65	1.80
6780.00	7.23	352.95	6696.13	-485.03	-474.43	-484.45	7.13
6866.00	15.87	1.67	6780.31	-467.87	-474.75	-467.29	10.22
6951.00	23.62	4.21	6860.26	-439.23	-473.16	-438.65	9.17
7037.00	32.30	359.56	6936.15	-398.99	-472.07	-398.41	10.40
7122.00	42.34	1.88	7003.67	-347.53	-471.30	-346.96	11.93
7207.00	53.27	1.40	7060.67	-284.68	-469.52	-284.11	12.87
7293.00	63.94	357.77	7105.42	-211.40	-470.19	-210.83	12.92
7378.00	73.05	354.30	7136.55	-132.61	-475.72	-132.03	11.37
7463.00	79.74	354.40	7156.54	-50.44	-483.85	-49.85	7.87
7505.00	85.18	357.20	7162.05	-8.94	-486.89	-8.34	14.54
7615.00	91.23	1.89	7165.49	100.92	-487.76	101.52	6.96
7700.00	90.56	1.80	7164.17	185.87	-485.02	186.46	0.80
7871.00	91.94	359.95	7160.44	356.80	-482.41	357.39	1.35
8020.00	90.56	3.45	7157.18	505.67	-477.99	506.25	2.52
8105.00	90.31	3.58	7156.54	590.51	-472.78	591.08	0.33
8190.00	90.88	3.48	7155.66	675.34	-467.55	675.91	0.68
8276.00	90.06	3.56	7154.95	761.17	-462.27	761.74	0.96
8361.00	89.63	3.03	7155.18	846.03	-457.38	846.59	0.80
8447.00	89.07	2.48	7156.16	931.93	-453.25	932.48	0.91
8532.00	88.95	0.55	7157.63	1016.88	-451.00	1017.43	2.27
8618.00	88.89	359.93	7159.25	1102.86	-450.64	1103.41	0.72

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		Vsect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
8703.00	89.21	359.07	7160.66	1187.85	-451.38	1188.40	1.08
8789.00	89.63	358.64	7161.53	1273.83	-453.10	1274.38	0.70
8874.00	89.69	358.57	7162.03	1358.80	-455.17	1359.35	0.11
8959.00	89.88	358.80	7162.35	1443.78	-457.12	1444.33	0.35
9045.00	89.82	359.17	7162.57	1529.76	-458.64	1530.32	0.44
9130.00	89.94	358.98	7162.75	1614.75	-460.02	1615.31	0.26
9216.00	90.09	358.54	7162.73	1700.73	-461.88	1701.29	0.54
9301.00	90.26	358.54	7162.47	1785.70	-464.04	1786.27	0.20
9386.00	90.18	358.14	7162.14	1870.67	-466.51	1871.24	0.48
9472.00	90.49	357.98	7161.64	1956.62	-469.42	1957.19	0.41
9557.00	90.31	358.72	7161.05	2041.58	-471.86	2042.15	0.90
9642.00	89.56	359.25	7161.14	2126.56	-473.37	2127.14	1.08
9728.00	89.75	358.86	7161.66	2212.55	-474.79	2213.13	0.50
9813.00	89.51	359.39	7162.21	2297.54	-476.09	2298.12	0.68
9898.00	88.77	359.64	7163.49	2382.52	-476.81	2383.11	0.92
9984.00	89.26	359.41	7164.97	2468.51	-477.52	2469.09	0.63
10069.00	90.18	359.60	7165.38	2553.50	-478.25	2554.09	1.11
10155.00	89.74	0.13	7165.44	2639.50	-478.46	2640.09	0.80
10240.00	90.25	0.80	7165.45	2724.50	-477.77	2725.08	0.99
10325.00	91.32	1.36	7164.28	2809.47	-476.16	2810.05	1.42
10410.00	91.23	1.58	7162.39	2894.43	-473.98	2895.00	0.28
10496.00	89.69	2.51	7161.70	2980.36	-470.92	2980.94	2.09
10581.00	88.71	1.80	7162.89	3065.29	-467.72	3065.86	1.42
10667.00	87.96	1.50	7165.39	3151.22	-465.24	3151.79	0.94
10752.00	87.97	0.99	7168.41	3236.15	-463.40	3236.71	0.60
10838.00	87.04	0.28	7172.15	3322.06	-462.45	3322.62	1.36
10923.00	87.53	359.35	7176.18	3406.96	-462.72	3407.53	1.24
11009.00	88.34	358.14	7179.27	3492.88	-464.60	3493.45	1.69
11094.00	88.40	358.80	7181.69	3577.82	-466.87	3578.39	0.78
11179.00	87.10	358.21	7185.03	3662.72	-469.09	3663.29	1.68
11264.00	86.91	357.55	7189.47	3747.55	-472.23	3748.12	0.81
11350.00	87.41	358.05	7193.73	3833.38	-475.52	3833.96	0.82
11435.00	87.66	358.01	7197.39	3918.25	-478.44	3918.83	0.30
11519.00	87.97	357.82	7200.59	4002.13	-481.50	4002.72	0.43
11605.00	88.27	357.91	7203.41	4088.03	-484.70	4088.61	0.36
11664.00	88.46	357.93	7205.09	4146.96	-486.84	4147.55	0.32
Projected to Total Depth:							
11722.00	88.46	357.93	7206.65	4204.90	-488.93	4205.50	0.00

Weatherford Surveys from 1014 ft MD to 11664 ft MD.

TD at 11722 ft MD.

The total correction is 8.59 deg relative to True North.