

Job Number: 125616
Company: Anadarko
Lease/Well: Xcel 35-27
Location: Xcel 13.27
Rig Name: Xtreme 11
RKB: 5042
G.L. or M.S.L.: GL

State/Country: USA/CO
Declination: 8.7
Grid: True
File name: C:\WINSERVE\125616.SVY
Date/Time: 18-Nov-12 / 08:44
Curve Name: Xcel 35-27

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 128.20
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

<i>Measured Depth FT</i>	<i>Incl Angle Deg</i>	<i>Drift Direction Deg</i>	<i>True Vertical Depth</i>	<i>N-S FT</i>	<i>E-W FT</i>	<i>Vertical Section FT</i>	<i>C L O S U R E Distance FT</i>	<i>Direction Deg</i>	<i>Dogleg Severity Deg/100</i>
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
76.00	.70	312.80	76.00	.32	-.34	-.46	.46	312.80	.92
164.00	.40	33.80	164.00	.94	-.56	-1.02	1.09	328.92	.85
252.00	1.60	84.60	251.98	1.31	.83	-.16	1.55	32.42	1.57
340.00	3.30	104.80	339.90	.78	4.50	3.06	4.57	80.23	2.14
416.00	3.80	115.60	415.75	-.87	8.89	7.52	8.93	95.60	1.10
507.00	4.80	130.00	506.50	-4.62	14.52	14.27	15.24	107.65	1.61
598.00	6.40	135.10	597.06	-10.66	21.02	23.11	23.57	116.89	1.84
689.00	8.80	139.10	687.26	-19.52	29.16	34.99	35.09	123.80	2.70
780.00	10.70	136.20	776.94	-30.88	39.57	50.19	50.19	127.97	2.16
870.00	11.50	126.40	865.26	-42.23	52.57	67.43	67.43	128.78	2.27
961.00	13.90	129.40	954.03	-54.56	68.32	87.43	87.43	128.61	2.73
1052.00	15.20	132.50	1042.11	-69.55	85.56	110.25	110.27	129.11	1.66
1150.00	14.20	130.00	1136.90	-85.96	104.25	135.08	135.12	129.51	1.21
1217.00	12.20	130.90	1202.13	-95.88	115.89	150.37	150.41	129.60	3.00
1307.00	13.80	134.80	1289.82	-109.67	130.70	170.53	170.61	130.00	2.03
1398.00	14.90	130.50	1377.98	-124.92	147.30	193.00	193.13	130.30	1.68
1489.00	16.50	128.80	1465.59	-140.61	166.27	217.62	217.75	130.22	1.83
1580.00	15.70	127.50	1553.02	-156.21	186.11	242.85	242.97	130.01	.96
1670.00	15.20	128.20	1639.76	-170.92	205.04	266.83	266.93	129.81	.59
1761.00	15.10	127.40	1727.60	-185.49	223.83	290.61	290.70	129.65	.25
1852.00	14.40	126.80	1815.60	-199.47	242.31	313.77	313.85	129.46	.79
1943.00	15.60	130.60	1903.50	-214.21	260.66	337.31	337.39	129.41	1.70
2033.00	15.00	130.80	1990.31	-229.70	278.66	361.04	361.13	129.50	.67
2124.00	15.20	127.50	2078.17	-244.65	297.04	384.73	384.82	129.48	.97
2215.00	15.30	123.70	2165.97	-258.58	316.50	408.63	408.70	129.25	1.10

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
				FT	FT	FT	Distance FT	Direction Deg	
2305.00	14.30	123.10	2252.98	-271.24	335.69	431.54	431.57	128.94	1.12
2396.00	14.30	126.20	2341.16	-284.01	354.17	453.96	453.98	128.73	.84
2487.00	14.50	132.20	2429.31	-298.30	371.68	476.56	476.58	128.75	1.65
2578.00	14.90	131.30	2517.33	-313.68	388.91	499.61	499.64	128.89	.51
2668.00	16.00	132.20	2604.08	-329.65	406.79	523.54	523.59	129.02	1.25
2759.00	15.20	133.30	2691.73	-346.25	424.76	547.93	548.01	129.19	.94
2850.00	15.70	129.10	2779.44	-362.20	443.00	572.12	572.22	129.27	1.35
2940.00	15.50	127.10	2866.13	-377.13	462.04	596.32	596.42	129.22	.64
3031.00	16.30	128.80	2953.64	-392.47	481.69	621.25	621.34	129.17	1.02
3122.00	14.40	129.20	3041.39	-407.63	500.42	645.34	645.43	129.17	2.09
3213.00	15.20	125.40	3129.38	-421.69	518.91	668.57	668.65	129.10	1.38
3303.00	13.40	125.70	3216.58	-434.61	537.00	690.77	690.84	128.98	2.00
3394.00	11.50	127.10	3305.44	-446.24	552.80	710.38	710.43	128.91	2.11
3485.00	9.70	128.70	3394.88	-456.50	566.02	727.11	727.17	128.89	2.00
3576.00	8.30	128.60	3484.76	-465.39	577.13	741.35	741.40	128.88	1.54
3666.00	7.00	129.60	3573.96	-472.94	586.44	753.33	753.38	128.89	1.45
3757.00	5.40	134.10	3664.42	-479.46	593.78	763.13	763.19	128.92	1.84
3848.00	6.10	123.80	3754.97	-485.13	600.88	772.21	772.27	128.92	1.37
3938.00	4.80	128.90	3844.56	-490.15	607.78	780.74	780.80	128.88	1.54
4029.00	3.70	131.50	3935.31	-494.49	612.94	787.48	787.54	128.89	1.23
4120.00	3.10	136.70	4026.15	-498.23	616.83	792.85	792.91	128.93	.74
4211.00	4.00	104.60	4116.98	-500.82	621.59	798.19	798.24	128.86	2.36
4302.00	3.40	102.80	4207.79	-502.21	627.29	803.54	803.56	128.68	.67
4392.00	2.80	111.10	4297.66	-503.60	631.95	808.05	808.06	128.55	.83
4483.00	2.20	109.80	4388.57	-504.99	635.66	811.83	811.84	128.46	.66
4574.00	1.80	114.60	4479.52	-506.18	638.61	814.88	814.88	128.40	.48
4665.00	1.10	98.70	4570.49	-506.90	640.77	817.03	817.03	128.35	.88
4756.00	1.10	100.90	4661.47	-507.20	642.49	818.56	818.56	128.29	.05
4847.00	1.20	114.50	4752.45	-507.76	644.22	820.26	820.26	128.24	.32
4937.00	.80	112.90	4842.44	-508.40	645.65	821.79	821.79	128.22	.45
5028.00	.40	110.90	4933.43	-508.76	646.53	822.70	822.70	128.20	.44
5119.00	.10	80.50	5024.43	-508.86	646.91	823.06	823.06	128.19	.35
5210.00	.10	351.00	5115.43	-508.76	646.98	823.05	823.05	128.18	.15
5301.00	.60	287.30	5206.43	-508.54	646.51	822.55	822.55	128.19	.62
5391.00	1.00	298.20	5296.42	-508.03	645.37	821.34	821.34	128.21	.47
5482.00	.60	310.70	5387.41	-507.35	644.30	820.08	820.08	128.22	.48
5573.00	1.10	308.20	5478.40	-506.50	643.26	818.73	818.73	128.22	.55
5663.00	1.30	299.30	5568.38	-505.46	641.69	816.86	816.86	128.23	.30
5754.00	1.30	297.40	5659.36	-504.48	639.87	814.82	814.82	128.25	.05
5845.00	1.00	294.00	5750.34	-503.68	638.23	813.04	813.04	128.28	.34
5936.00	1.00	308.90	5841.33	-502.86	636.89	811.48	811.48	128.29	.28
6026.00	1.00	310.00	5931.31	-501.86	635.67	809.91	809.91	128.29	.02
6117.00	1.20	327.20	6022.30	-500.55	634.55	808.21	808.21	128.27	.42
6208.00	1.00	327.50	6113.28	-499.08	633.61	806.56	806.56	128.23	.22
6298.00	1.10	316.80	6203.26	-497.79	632.59	804.96	804.96	128.20	.24

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	Direction Deg	Dogleg Severity Deg/100
6389.00	1.10	324.20	6294.25	-496.45	631.48	803.26	803.26	128.17	.16
6480.00	1.10	340.50	6385.23	-494.91	630.68	801.68	801.68	128.12	.34
6570.00	1.00	344.60	6475.22	-493.34	630.18	800.32	800.32	128.06	.14
6661.00	.70	104.30	6566.21	-492.71	630.51	800.19	800.19	128.01	1.62
6752.00	.60	88.40	6657.20	-492.84	631.53	801.06	801.07	127.97	.23
6843.00	.50	103.50	6748.20	-492.92	632.39	801.79	801.80	127.93	.19
6934.00	.80	85.50	6839.19	-492.96	633.41	802.62	802.63	127.89	.39
7024.00	.50	123.80	6929.19	-493.13	634.36	803.47	803.49	127.86	.57
7115.00	.70	111.20	7020.18	-493.55	635.21	804.40	804.42	127.85	.26
7206.00	.60	110.80	7111.18	-493.92	636.17	805.39	805.40	127.83	.11
7296.00	.40	101.30	7201.17	-494.15	636.92	806.12	806.13	127.81	.24
7387.00	.40	135.30	7292.17	-494.44	637.46	806.71	806.73	127.80	.26
7478.00	.30	132.60	7383.17	-494.82	637.86	807.27	807.29	127.80	.11
7569.00	.50	130.00	7474.17	-495.24	638.34	807.90	807.92	127.81	.22
7659.00	.70	117.30	7564.16	-495.75	639.12	808.83	808.85	127.80	.27
7750.00	.60	109.90	7655.16	-496.16	640.07	809.83	809.85	127.78	.14
7841.00	.70	98.70	7746.15	-496.41	641.06	810.77	810.79	127.75	.18
Straight Line to TD									
8025.00	.70	98.70	7930.14	-496.75	643.29	812.72	812.76	127.68	.00