



Company: Encana Oil & Gas
Rig: Production/Lightning
Latitude: 40.388452
Longitude: -104.459765
API # 05-123-26393
Date: 1/17/2013

Well: State Peterson 4-2-20
Location: Weld County, Colorado
North Reference: True North
Depth Reference: Ground Level
Surveyor: Randy Holcomb
VS: 0

MS Gyro Survey Calculations

Depth	Inc	AzG	N/-S	E/-W	TVD	DL	VS	CD	Cbrg
0.000	0.000	0.000	0.000	0.000	0.000	****	0.000	0.000	0.000
100.000	0.606	248.074	-0.197	-0.490	99.998	0.606	-0.197	0.529	248.074
200.000	0.547	295.664	-0.188	-1.411	199.994	0.468	-0.188	1.424	262.409
300.000	0.457	323.091	0.337	-2.081	299.990	0.254	0.337	2.108	279.208
400.000	0.540	265.818	0.622	-2.790	399.987	0.483	0.622	2.859	282.561
500.000	0.507	11.649	1.021	-3.171	499.984	0.835	1.021	3.331	287.848
600.000	0.480	103.421	1.357	-2.674	599.982	0.709	1.357	2.998	296.912
700.000	0.530	17.587	1.701	-2.126	699.979	0.689	1.701	2.723	308.651
800.000	0.389	8.726	2.476	-1.935	799.976	0.158	2.476	3.143	321.993
900.000	0.048	11.363	2.852	-1.876	899.975	0.341	2.852	3.414	326.674
1000.000	0.189	45.734	3.009	-1.749	999.975	0.152	3.009	3.480	329.829
1100.000	0.700	23.958	3.682	-1.383	1099.972	0.529	3.682	3.933	339.418
1200.000	0.613	24.042	4.729	-0.917	1199.965	0.087	4.729	4.817	349.028
1300.000	0.523	45.380	5.538	-0.374	1299.960	0.228	5.538	5.550	356.136
1400.000	0.491	1.518	6.287	-0.038	1399.957	0.380	6.287	6.287	359.656
1500.000	0.142	47.118	6.799	0.064	1499.955	0.405	6.799	6.799	0.540
1600.000	0.396	1.289	7.229	0.162	1599.954	0.314	7.229	7.230	1.287
1700.000	0.024	316.181	7.589	0.156	1699.953	0.380	7.589	7.591	1.177
1800.000	0.070	53.309	7.641	0.191	1799.953	0.077	7.641	7.643	1.431
1900.000	0.289	263.767	7.650	-0.010	1899.953	0.351	7.650	7.650	359.922
2000.000	0.476	309.473	7.887	-0.581	1999.951	0.343	7.887	7.908	355.784
2100.000	0.853	299.079	8.513	-1.553	2099.944	0.395	8.513	8.653	349.661
2200.000	0.960	283.307	9.068	-3.019	2199.931	0.270	9.068	9.557	341.583
2300.000	0.812	311.950	9.734	-4.362	2299.920	0.461	9.734	10.667	335.862
2400.000	0.766	329.713	10.785	-5.226	2399.911	0.248	10.785	11.985	334.146
2500.000	0.707	292.907	11.603	-6.132	2499.903	0.468	11.603	13.124	332.144
2600.000	0.459	262.927	11.794	-7.098	2599.898	0.385	11.794	13.765	328.959
2700.000	0.871	296.543	12.084	-8.175	2699.891	0.551	12.084	14.590	325.921
2800.000	0.720	226.032	11.987	-9.307	2799.884	0.926	11.987	15.176	322.175
2900.000	0.719	198.403	10.956	-9.957	2899.876	0.344	10.956	14.805	317.735
3000.000	0.804	197.397	9.691	-10.365	2999.867	0.086	9.691	14.190	313.077
3100.000	0.798	199.648	8.366	-10.809	3099.857	0.032	8.366	13.668	307.739
3200.000	0.660	211.612	7.219	-11.345	3199.849	0.205	7.219	13.447	302.469
3300.000	0.639	246.312	6.504	-12.157	3299.843	0.388	6.504	13.788	298.147
3400.000	0.703	258.711	6.160	-13.269	3399.837	0.158	6.160	14.630	294.903
3500.000	0.783	210.463	5.451	-14.218	3499.829	0.612	5.451	15.227	290.978
3600.000	0.680	228.271	4.467	-15.007	3599.821	0.248	4.467	15.658	286.578
3700.000	0.591	206.860	3.612	-15.683	3699.815	0.252	3.612	16.093	282.970
3800.000	1.056	189.515	2.243	-16.068	3799.805	0.522	2.243	16.224	277.947

3900.000	1.164	185.777	0.324	-16.323	3899.786	0.130	0.324	16.326	271.136
4000.000	1.029	194.911	-1.555	-16.656	3999.768	0.220	-1.555	16.729	264.667
4100.000	1.007	151.556	-3.195	-16.469	4099.753	0.752	-3.195	16.776	259.019
4200.000	0.909	137.425	-4.552	-15.513	4199.739	0.255	-4.552	16.168	253.646
4300.000	1.423	131.227	-5.955	-14.043	4299.718	0.528	-5.955	15.253	247.020
4400.000	1.707	99.610	-7.022	-11.641	4399.683	0.895	-7.022	13.594	238.901
4500.000	2.113	84.014	-7.078	-8.339	4499.628	0.656	-7.078	10.938	229.675
4600.000	2.943	83.589	-6.599	-3.954	4599.529	0.830	-6.599	7.693	210.929
4700.000	3.628	87.373	-6.168	1.758	4699.365	0.718	-6.168	6.413	164.092
4800.000	3.460	93.170	-6.189	7.932	4799.174	0.396	-6.189	10.061	127.967
4900.000	3.138	77.888	-5.782	13.621	4899.010	0.933	-5.782	14.797	113.001
5000.000	2.740	60.624	-4.035	18.381	4998.880	0.966	-4.035	18.819	102.381
5100.000	2.880	61.812	-1.676	22.678	5098.760	0.151	-1.676	22.740	94.226
5200.000	2.598	63.082	0.537	26.913	5198.645	0.288	0.537	26.918	88.857
5300.000	2.648	68.942	2.393	31.090	5298.541	0.273	2.393	31.182	85.598
5400.000	2.493	88.917	3.264	35.421	5398.442	0.904	3.264	35.571	84.734
5500.000	2.471	94.149	3.150	39.745	5498.348	0.228	3.150	39.870	85.469
5600.000	2.416	99.911	2.631	43.972	5598.258	0.252	2.631	44.051	86.576
5700.000	2.129	105.221	1.780	47.841	5698.179	0.356	1.780	47.874	87.869
5800.000	1.888	106.808	0.816	51.210	5798.117	0.247	0.816	51.216	89.087
5900.000	1.419	105.018	0.019	53.982	5898.076	0.472	0.019	53.982	89.980
6000.000	1.346	103.510	-0.576	56.321	5998.046	0.081	-0.576	56.324	90.586
6100.000	1.462	95.597	-0.975	58.733	6098.016	0.226	-0.975	58.741	90.951
6200.000	1.487	104.429	-1.423	61.259	6197.983	0.228	-1.423	61.275	91.330
6300.000	1.803	91.357	-1.783	64.088	6297.942	0.489	-1.783	64.113	91.594
6400.000	1.700	98.715	-2.045	67.127	6397.896	0.247	-2.045	67.158	91.745
6500.000	1.714	108.452	-2.743	70.011	6497.852	0.290	-2.743	70.065	92.244
6600.000	2.192	100.077	-3.551	73.312	6597.794	0.556	-3.551	73.398	92.773
6700.000	1.561	105.972	-4.260	76.504	6697.740	0.659	-4.260	76.623	93.187
6800.000	1.093	103.895	-4.864	78.739	6797.712	0.470	-4.864	78.889	93.535
6900.000	1.150	103.937	-5.335	80.639	6897.693	0.057	-5.335	80.815	93.785
7000.000	0.934	83.467	-5.484	82.422	6997.677	0.427	-5.484	82.604	93.806