



**Company:** Encana Oil and Gas  
**Rig:** Production / Coretech  
**Latitude:** 40.126  
**Longitude:** -105.043  
**API #** 05-123-23550  
**Date:** 9-25-14

**Well:** Regnier Farms 32-19  
**Location:** Weld County, Colorado  
**North Reference:** True North  
**Depth Reference:** Ground Level  
**Surveyor:** Kevin McDowell  
**VS:** 0.000

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	0.000
100.000	0.428	186.910	-0.371	-0.045	99.999	0.428	-0.371	0.374	186.910
200.000	0.290	183.050	-0.995	-0.103	199.997	0.141	-0.995	1.000	185.935
300.000	0.343	229.267	-1.442	-0.344	299.996	0.253	-1.442	1.483	193.397
400.000	0.705	252.132	-1.826	-1.156	399.991	0.412	-1.826	2.161	212.330
500.000	0.881	243.452	-2.359	-2.429	499.982	0.212	-2.359	3.386	225.843
600.000	0.960	268.454	-2.725	-3.954	599.969	0.406	-2.725	4.802	235.430
700.000	0.952	258.039	-2.919	-5.604	699.956	0.174	-2.919	6.319	242.483
800.000	0.984	253.661	-3.333	-7.241	799.941	0.081	-3.333	7.971	245.282
900.000	1.004	250.667	-3.865	-8.892	899.926	0.056	-3.865	9.695	246.508
1000.000	1.150	260.804	-4.315	-10.709	999.909	0.239	-4.315	11.546	248.053
1100.000	1.342	266.502	-4.547	-12.868	1099.885	0.228	-4.547	13.648	250.539
1200.000	1.321	285.614	-4.308	-15.147	1199.858	0.443	-4.308	15.748	254.124
1300.000	1.713	288.788	-3.516	-17.673	1299.823	0.401	-3.516	18.019	258.747
1400.000	1.567	269.398	-3.049	-20.456	1399.783	0.571	-3.049	20.682	261.521
1500.000	1.723	276.164	-2.902	-23.318	1499.742	0.249	-2.902	23.498	262.905
1600.000	1.608	280.148	-2.494	-26.193	1599.700	0.163	-2.494	26.312	264.562
1700.000	1.591	280.627	-1.990	-28.939	1699.661	0.022	-1.990	29.007	266.065
1800.000	1.419	262.433	-1.898	-31.530	1799.627	0.505	-1.898	31.587	266.556
1900.000	1.349	264.562	-2.172	-33.930	1899.598	0.087	-2.172	34.000	266.337
2000.000	1.186	263.158	-2.407	-36.130	1999.573	0.166	-2.407	36.210	266.188
2100.000	0.923	260.462	-2.664	-37.952	2099.556	0.267	-2.664	38.045	265.985
2200.000	0.949	270.499	-2.790	-39.574	2199.543	0.166	-2.790	39.672	265.967
2300.000	1.119	287.236	-2.494	-41.334	2299.527	0.345	-2.494	41.409	266.548
2400.000	1.268	274.344	-2.121	-43.370	2399.505	0.306	-2.121	43.422	267.201
2500.000	1.126	281.671	-1.838	-45.436	2499.483	0.208	-1.838	45.473	267.684
2600.000	1.167	285.376	-1.369	-47.380	2599.463	0.084	-1.369	47.400	268.345
2700.000	1.241	264.447	-1.204	-49.439	2699.442	0.443	-1.204	49.454	268.605
2800.000	1.295	282.707	-1.060	-51.619	2799.418	0.406	-1.060	51.630	268.823
2900.000	1.543	253.527	-1.194	-54.013	2899.388	0.754	-1.194	54.026	268.734
3000.000	1.365	272.894	-1.515	-56.493	2999.357	0.520	-1.515	56.514	268.464
3100.000	1.455	267.261	-1.516	-58.950	3099.326	0.165	-1.516	58.970	268.527
3200.000	1.525	257.421	-1.866	-61.517	3199.293	0.265	-1.866	61.545	268.262
3300.000	1.574	285.441	-1.790	-64.139	3299.258	0.752	-1.790	64.164	268.401
3400.000	2.057	264.870	-1.585	-67.251	3399.208	0.804	-1.585	67.270	268.650
3500.000	2.314	273.034	-1.639	-71.055	3499.135	0.403	-1.639	71.074	268.679
3600.000	2.416	273.104	-1.418	-75.176	3599.050	0.102	-1.418	75.190	268.920
3700.000	2.444	274.826	-1.124	-79.406	3698.960	0.078	-1.124	79.414	269.189
3800.000	2.489	273.038	-0.830	-83.698	3798.868	0.089	-0.830	83.702	269.432

3900.000	2.590	286.453	-0.075	-88.034	3898.770	0.602	-0.075	88.034	269.951
4000.000	2.376	276.396	0.796	-92.261	3998.677	0.484	0.796	92.264	270.495
4100.000	1.842	269.057	1.001	-95.928	4098.609	0.597	1.001	95.934	270.598
4200.000	1.781	243.183	0.273	-98.923	4198.561	0.813	0.273	98.923	270.158
4300.000	1.708	260.762	-0.667	-101.781	4298.515	0.538	-0.667	101.783	269.624
4400.000	1.739	248.603	-1.460	-104.665	4398.470	0.366	-1.460	104.675	269.201
4500.000	1.641	233.936	-2.856	-107.235	4498.427	0.442	-2.856	107.273	268.474
4600.000	1.521	254.811	-4.047	-109.673	4598.390	0.585	-4.047	109.748	267.887
4700.000	1.212	253.124	-4.702	-111.966	4698.361	0.312	-4.702	112.065	267.595
4800.000	1.141	244.850	-5.432	-113.880	4798.340	0.184	-5.432	114.009	267.269
4900.000	1.269	224.429	-6.646	-115.556	4898.319	0.445	-6.646	115.747	266.708
5000.000	1.365	238.722	-8.055	-117.349	4998.292	0.341	-8.055	117.625	266.073
5100.000	1.178	236.990	-9.234	-119.229	5098.268	0.191	-9.234	119.586	265.572
5200.000	1.287	250.497	-10.169	-121.150	5198.245	0.310	-10.169	121.576	265.202
5300.000	0.917	271.176	-10.527	-123.008	5298.226	0.538	-10.527	123.458	265.108
5400.000	0.648	257.328	-10.635	-124.359	5398.217	0.327	-10.635	124.813	265.112
5500.000	0.414	280.774	-10.691	-125.265	5498.213	0.315	-10.691	125.721	265.122
5600.000	0.284	303.226	-10.488	-125.827	5598.211	0.186	-10.488	126.263	265.235
5700.000	0.576	343.221	-9.872	-126.179	5698.208	0.402	-9.872	126.564	265.527
5800.000	0.754	2.218	-8.734	-126.298	5798.202	0.281	-8.734	126.600	266.044
5900.000	0.673	23.337	-7.537	-126.040	5898.194	0.273	-7.537	126.265	266.578
6000.000	1.269	68.671	-6.595	-124.776	5998.181	0.929	-6.595	124.950	266.975
6100.000	1.627	85.101	-6.071	-122.330	6098.149	0.545	-6.071	122.481	267.159
6200.000	0.966	83.412	-5.853	-120.079	6198.123	0.662	-5.853	120.221	267.209
6300.000	0.943	58.471	-5.326	-118.540	6298.109	0.413	-5.326	118.660	267.427
6400.000	0.713	100.935	-5.014	-117.228	6398.100	0.637	-5.014	117.335	267.551
6500.000	0.488	54.546	-4.885	-116.270	6498.095	0.516	-4.885	116.372	267.594
6600.000	0.559	70.246	-4.473	-115.464	6598.091	0.159	-4.473	115.551	267.781
6700.000	0.459	13.386	-3.919	-114.913	6698.087	0.492	-3.919	114.980	268.047
6800.000	0.218	80.706	-3.499	-114.632	6798.086	0.425	-3.499	114.686	268.252
6900.000	0.290	75.938	-3.407	-114.199	6898.085	0.075	-3.407	114.250	268.291
7000.000	0.063	256.909	-3.358	-114.007	6998.084	0.353	-3.358	114.057	268.313
7100.000	0.289	39.253	-3.175	-113.901	7098.084	0.341	-3.175	113.946	268.403
7200.000	0.010	20.039	-2.971	-113.739	7198.084	0.280	-2.971	113.778	268.504
7300.000	0.156	79.677	-2.939	-113.602	7298.083	0.151	-2.939	113.640	268.518
7400.000	0.127	66.316	-2.870	-113.367	7398.083	0.044	-2.870	113.403	268.550
7500.000	0.067	112.281	-2.848	-113.212	7498.083	0.093	-2.848	113.248	268.559
7600.000	0.215	200.380	-3.046	-113.223	7598.083	0.223	-3.046	113.264	268.459
7700.000	0.269	255.479	-3.280	-113.515	7698.082	0.228	-3.280	113.563	268.345
7800.000	0.601	320.851	-2.932	-114.073	7798.079	0.547	-2.932	114.111	268.528
7850.000	0.468	304.544	-2.613	-114.407	7848.077	0.402	-2.613	114.437	268.692