



Company: Anadarko Petroleum Corp.  
 Well/API: Mayer #4-15/05-123-21744  
 Tool Type: North Seeking Rate Gyro  
 Rig Name: Production / Coretech  
 County/State: Weld/Colorado  
 Latitude: 40.232, Longitude: -104.885  
 Directions are relative to True North  
 VS-Azi: 0.000 Degrees



### FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB = GL Elevation = 4793 Feet

#### DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro\_run01-01-de\_01.ut

Minimum Curvature Method

Report Date/Time: 10/6/2014 / 17:11

Lat/Long & Elevation Obtained By Handheld GPS At Wellhead

Handheld GPS Reference: NAD83/Device Error: +/- 9 Feet

VES Survey International - Henderson, CO

Kevin McDowell

303-853-4976

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	****
100.000	0.385	38.347	99.999	0.264	0.209	0.264	0.336	38.347	0.385
200.000	0.396	59.525	199.997	0.703	0.715	0.703	1.003	45.504	0.144
300.000	0.364	60.676	299.995	1.034	1.290	1.034	1.653	51.300	0.033
400.000	0.374	51.977	399.993	1.391	1.825	1.391	2.294	52.689	0.057
500.000	0.384	51.329	499.991	1.801	2.344	1.801	2.956	52.456	0.010
600.000	0.242	60.035	599.989	2.116	2.788	2.116	3.500	52.804	0.149
700.000	0.117	237.204	699.989	2.166	2.886	2.166	3.608	53.102	0.359
800.000	0.307	262.183	799.988	2.075	2.535	2.075	3.276	50.699	0.207
900.000	0.381	260.751	899.986	1.985	1.942	1.985	2.777	44.368	0.075
1000.000	0.576	263.231	999.983	1.872	1.115	1.872	2.179	30.769	0.196
1100.000	0.764	265.814	1099.976	1.764	-0.049	1.764	1.765	358.400	0.191
1200.000	0.784	261.093	1199.967	1.610	-1.390	1.610	2.127	319.187	0.067
1300.000	1.105	259.389	1299.953	1.326	-3.014	1.326	3.293	293.755	0.322
1400.000	1.116	265.323	1399.934	1.069	-4.932	1.069	5.046	282.235	0.115
1500.000	1.182	266.899	1499.914	0.934	-6.932	0.934	6.995	277.675	0.074
1600.000	0.814	261.521	1599.899	0.774	-8.665	0.774	8.700	275.103	0.380
1700.000	0.848	258.377	1699.888	0.520	-10.092	0.520	10.106	272.949	0.057
1800.000	0.978	273.047	1799.876	0.416	-11.669	0.416	11.677	272.043	0.266
1900.000	1.171	276.107	1899.858	0.570	-13.538	0.570	13.550	272.412	0.201
2000.000	1.139	263.182	1999.838	0.561	-15.541	0.561	15.551	272.068	0.262
2100.000	1.505	243.256	2099.812	-0.148	-17.701	-0.148	17.701	269.521	0.583
2200.000	1.930	238.827	2199.767	-1.611	-20.314	-1.611	20.378	265.466	0.445
2300.000	2.052	235.665	2299.706	-3.492	-23.233	-3.492	23.494	261.452	0.164
2400.000	2.337	236.821	2399.633	-5.617	-26.418	-5.617	27.008	257.996	0.288
2500.000	2.352	242.238	2499.549	-7.689	-29.940	-7.689	30.911	255.597	0.222
2600.000	2.442	240.394	2599.462	-9.697	-33.608	-9.697	34.979	253.905	0.118
2700.000	2.071	249.299	2699.384	-11.388	-37.150	-11.388	38.856	252.957	0.510
2800.000	1.510	254.326	2799.335	-12.383	-40.109	-12.383	41.977	252.843	0.581
2900.000	1.371	257.410	2899.304	-13.000	-42.545	-13.000	44.487	253.009	0.159
3000.000	1.151	253.744	2999.279	-13.542	-44.677	-13.542	46.684	253.138	0.235
3100.000	0.809	230.197	3099.265	-14.275	-46.183	-14.275	48.339	252.824	0.521
3200.000	0.519	227.982	3199.258	-15.030	-47.063	-15.030	49.404	252.288	0.291
3300.000	0.426	83.419	3299.257	-15.291	-47.030	-15.291	49.453	251.989	0.900
3400.000	0.859	110.130	3399.250	-15.506	-45.957	-15.506	48.503	251.355	0.516

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
3500.000	0.922	144.995	3499.239	-16.423	-44.791	-16.423	47.707	249.864	0.537
3600.000	0.862	95.959	3599.228	-17.161	-43.582	-17.161	46.839	248.508	0.742
3700.000	0.865	118.934	3699.217	-17.604	-42.173	-17.604	45.700	247.343	0.344
3800.000	0.868	145.891	3799.206	-18.596	-41.087	-18.596	45.100	245.648	0.404
3900.000	0.905	190.781	3899.195	-19.999	-40.810	-19.999	45.447	243.893	0.678
4000.000	1.140	215.808	3999.180	-21.582	-41.540	-21.582	46.812	242.546	0.499
4100.000	1.351	229.352	4099.156	-23.157	-43.017	-23.157	48.853	241.706	0.360
4200.000	1.407	243.699	4199.128	-24.468	-45.011	-24.468	51.232	241.472	0.349
4300.000	1.618	255.004	4299.093	-25.377	-47.476	-25.377	53.832	241.874	0.365
4400.000	1.888	278.160	4399.047	-25.509	-50.470	-25.509	56.550	243.187	0.752
4500.000	1.725	277.990	4498.998	-25.066	-53.591	-25.066	59.163	244.933	0.163
4600.000	1.576	281.778	4598.956	-24.576	-56.428	-24.576	61.548	246.466	0.185
4700.000	1.253	279.173	4698.926	-24.121	-58.854	-24.121	63.605	247.714	0.330
4800.000	1.149	270.550	4798.904	-23.937	-60.936	-23.937	65.469	248.554	0.208
4900.000	0.882	255.344	4898.888	-24.122	-62.683	-24.122	67.164	248.952	0.377
5000.000	0.710	269.725	4998.879	-24.320	-64.047	-24.320	68.509	249.207	0.262
5100.000	0.784	263.786	5098.870	-24.397	-65.346	-24.397	69.752	249.527	0.107
5200.000	0.710	295.204	5198.862	-24.207	-66.587	-24.207	70.851	250.022	0.411
5300.000	0.629	293.614	5298.855	-23.723	-67.650	-23.723	71.689	250.676	0.083
5400.000	0.417	252.650	5398.851	-23.612	-68.500	-23.612	72.456	250.981	0.416
5500.000	0.648	283.349	5498.847	-23.590	-69.398	-23.590	73.298	251.226	0.359
5600.000	0.738	253.888	5598.840	-23.638	-70.567	-23.638	74.421	251.481	0.363
5700.000	0.513	222.972	5698.834	-24.144	-71.490	-24.144	75.457	251.339	0.398
5800.000	0.683	259.932	5798.829	-24.576	-72.383	-24.576	76.441	251.246	0.412
5900.000	0.754	245.399	5898.821	-24.954	-73.568	-24.954	77.685	251.263	0.195
6000.000	0.556	247.410	5998.815	-25.414	-74.615	-25.414	78.824	251.191	0.199
6100.000	0.594	246.060	6098.810	-25.811	-75.537	-25.811	79.825	251.134	0.040
6200.000	0.621	213.672	6198.804	-26.473	-76.312	-26.473	80.773	250.868	0.340
6300.000	0.760	304.914	6298.800	-26.544	-77.156	-26.544	81.595	251.015	0.992
6400.000	0.538	221.584	6398.795	-26.515	-78.012	-26.515	82.395	251.228	0.879
6500.000	0.628	226.394	6498.790	-27.244	-78.720	-27.244	83.301	250.910	0.103
6600.000	0.395	225.603	6598.786	-27.863	-79.363	-27.863	84.112	250.655	0.234
6700.000	0.483	209.556	6698.783	-28.470	-79.817	-28.470	84.742	250.369	0.150
6800.000	0.697	175.518	6798.778	-29.443	-79.977	-29.443	85.225	249.789	0.401
6900.000	0.302	182.821	6898.774	-30.313	-79.942	-30.313	85.497	249.234	0.399

HORIZONTAL DISPLACEMENT IS  
85.497 FEET AT 249.234 DEGREES