



Company: Anadarko Petroleum Corp.
 Well/API: Cook 6-9/05-123-21928
 Tool Type: North Seeking Rate Gyro
 Rig Name: CoreTech
 County/State: Weld/Colorado
 VS-Azi: 0.000 Degrees
 Latitude: 40.15642, Longitude: -104.67426
 All Azimuths referenced to True North
 No Grid Convergence Applied



Depth Reference : RKB = GL Elevation = 4875

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyrosurvey.ut

Minimum Curvature Method

Report Date/Time: 2/24/2016 / 13:42

Lat/Long Obtained By Handheld GPS At Wellhead

Handheld GPS Reference: NAD83/Device Error: ±9 Feet

VES Survey International - Henderson CO

Surveyor: Justin Williams / Cook 6-9

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	0.227	169.189	100.000	-0.194	0.037	-0.194	0.198	169.189	0.227
200.000	0.242	167.536	199.999	-0.595	0.120	-0.595	0.607	168.613	0.017
300.000	0.149	122.190	299.998	-0.870	0.275	-0.870	0.913	162.449	0.174
400.000	0.254	296.545	399.998	-0.840	0.187	-0.840	0.861	167.468	0.402
500.000	0.313	244.412	499.997	-0.859	-0.258	-0.859	0.897	196.707	0.255
600.000	0.293	275.607	599.996	-0.952	-0.759	-0.952	1.217	218.543	0.164
700.000	0.150	296.427	699.995	-0.869	-1.130	-0.869	1.425	232.434	0.162
800.000	0.281	127.923	799.995	-0.961	-1.054	-0.961	1.426	227.624	0.428
900.000	0.211	238.869	899.994	-1.207	-1.018	-1.207	1.579	220.151	0.407
1000.000	0.346	302.407	999.993	-1.141	-1.431	-1.141	1.830	231.438	0.315
1100.000	0.304	202.818	1099.992	-1.223	-1.788	-1.223	2.167	235.627	0.497
1200.000	0.601	222.390	1199.989	-1.855	-2.245	-1.855	2.912	230.430	0.331
1300.000	0.575	209.661	1299.984	-2.679	-2.847	-2.679	3.909	226.743	0.133
1400.000	0.668	230.156	1399.978	-3.489	-3.543	-3.489	4.972	225.444	0.239
1500.000	0.771	204.172	1499.970	-4.476	-4.266	-4.476	6.184	223.626	0.339
1600.000	0.560	266.624	1599.965	-5.119	-5.030	-5.119	7.176	224.500	0.713
1700.000	0.708	260.373	1699.959	-5.251	-6.127	-5.251	8.069	229.405	0.163
1800.000	1.099	269.597	1799.946	-5.361	-7.695	-5.361	9.378	235.137	0.416

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
1900.000	0.680	248.731	1899.934	-5.583	-9.207	-5.583	10.767	238.769	0.523
2000.000	0.667	317.715	1999.929	-5.367	-10.151	-5.367	11.483	242.132	0.763
2100.000	0.852	351.322	2099.920	-4.202	-10.655	-4.202	11.453	248.478	0.474
2200.000	0.598	344.701	2199.912	-2.963	-10.905	-2.963	11.300	254.798	0.267
2300.000	0.745	359.208	2299.905	-1.809	-11.051	-1.809	11.199	260.703	0.224
2400.000	0.418	86.457	2399.902	-1.136	-10.696	-1.136	10.756	263.937	0.837
2500.000	0.554	312.076	2499.900	-0.790	-10.691	-0.790	10.720	265.775	0.897
2600.000	1.010	326.973	2599.890	0.273	-11.530	0.273	11.533	271.358	0.496
2700.000	0.832	357.902	2699.878	1.738	-12.037	1.738	12.162	278.215	0.520
2800.000	0.879	1.786	2799.867	3.230	-12.040	3.230	12.465	285.016	0.075
2900.000	0.640	297.077	2899.860	4.250	-12.513	4.250	13.216	288.761	0.837
3000.000	0.706	263.993	2999.853	4.440	-13.624	4.440	14.329	288.052	0.388
3100.000	0.643	304.971	3099.847	4.698	-14.696	4.698	15.429	287.726	0.476
3200.000	0.856	17.828	3199.840	5.730	-14.928	5.730	15.989	290.999	0.906
3300.000	0.912	80.934	3299.830	6.566	-13.913	6.566	15.385	295.264	0.926
3400.000	0.859	149.306	3399.821	6.047	-12.745	6.047	14.106	295.382	0.996
3500.000	0.094	39.290	3499.817	5.466	-12.310	5.466	13.469	293.943	0.896
3600.000	0.524	88.056	3599.816	5.545	-11.800	5.545	13.038	295.170	0.467
3700.000	0.683	100.750	3699.810	5.450	-10.758	5.450	12.060	296.865	0.206
3800.000	0.609	22.469	3799.806	5.830	-9.970	5.830	11.549	300.317	0.817
3900.000	0.862	56.530	3899.798	6.736	-9.139	6.736	11.353	306.392	0.494
4000.000	0.330	14.614	3999.792	7.430	-8.439	7.430	11.243	311.361	0.655
4100.000	0.715	245.704	4099.790	7.452	-8.934	7.452	11.634	309.831	0.957
4200.000	1.138	190.605	4199.778	6.220	-9.686	6.220	11.511	302.706	0.935
4300.000	0.822	243.773	4299.765	4.927	-10.512	4.927	11.609	295.112	0.921
4400.000	1.040	250.658	4399.752	4.309	-12.011	4.309	12.761	289.736	0.245
4500.000	0.935	255.072	4499.737	3.798	-13.656	3.798	14.175	285.543	0.129
4600.000	0.284	343.985	4599.733	3.827	-14.514	3.827	15.010	284.770	0.973
4700.000	0.379	14.840	4699.731	4.385	-14.497	4.385	15.146	286.829	0.199
4800.000	0.836	284.221	4799.727	4.884	-15.120	4.884	15.889	287.901	0.922
4900.000	0.669	277.120	4899.718	5.136	-16.407	5.136	17.192	287.381	0.191
5000.000	0.665	258.970	4999.711	5.097	-17.555	5.097	18.280	286.190	0.210
5100.000	1.030	213.092	5099.701	4.233	-18.615	4.233	19.090	282.811	0.741
5200.000	0.730	158.656	5199.691	2.887	-18.874	2.887	19.094	278.696	0.848
5300.000	1.032	99.274	5299.681	2.148	-17.754	2.148	17.883	276.899	0.911
5400.000	0.739	68.994	5399.669	2.234	-16.263	2.234	16.416	277.823	0.542
5500.000	0.720	355.943	5499.663	3.092	-15.705	3.092	16.007	281.138	0.868
5600.000	0.608	28.933	5599.657	4.183	-15.493	4.183	16.048	285.110	0.392
5700.000	0.925	113.261	5699.650	4.329	-14.495	4.329	15.128	286.629	1.055
5800.000	0.123	49.683	5799.646	4.080	-13.672	4.080	14.268	286.616	0.877

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
5900.000	1.164	115.933	5899.638	3.705	-12.677	3.705	13.207	286.292	1.120
6000.000	1.817	144.150	5999.605	1.976	-10.835	1.976	11.013	280.335	0.964
6100.000	1.990	152.071	6099.550	-0.843	-9.093	-0.843	9.132	264.701	0.315
6200.000	1.796	136.574	6199.496	-3.516	-7.202	-3.516	8.015	243.982	0.546
6300.000	1.410	159.995	6299.458	-5.810	-5.704	-5.810	8.142	224.475	0.752
6400.000	1.620	142.573	6399.424	-8.088	-4.424	-8.088	9.219	208.679	0.504
6500.000	1.315	132.173	6499.391	-9.981	-2.715	-9.981	10.344	195.216	0.404
6600.000	0.883	116.210	6599.372	-11.092	-1.173	-11.092	11.154	186.039	0.526
6700.000	1.233	163.868	6699.357	-12.466	-0.183	-12.466	12.467	180.843	0.913
6800.000	0.443	156.223	6799.346	-13.853	0.271	-13.853	13.856	178.878	0.797
6900.000	1.324	123.910	6899.333	-14.851	1.386	-14.851	14.915	174.669	0.979
7000.000	1.016	139.469	6999.312	-16.169	2.920	-16.169	16.430	169.762	0.440
7100.000	0.514	92.959	7099.304	-16.866	3.944	-16.866	17.321	166.838	0.760