



Company: Anadarko Petroleum Corp.
 Well/API: Berry 11-26A/05-123-21089
 Tool Type: North Seeking Rate Gyro
 Rig Name: Production/CoreTech
 County/State: Weld/Colorado
 Latitude: 40.194, Longitude: -104.861
 Directions are relative to True North
 VS-Azi: 0.000 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB = GL Elevation = 4820

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro.ut

Minimum Curvature Method

Report Date/Time: 12/31/2014 / 11:48

Lat/Long Obtained By Handheld GPS At Wellhead

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

VES Survey International - Henderson CO

Justin Williams

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	0.477	307.498	99.999	0.253	-0.330	0.253	0.416	307.498	0.477
200.000	0.572	308.162	199.995	0.815	-1.053	0.815	1.332	307.747	0.095
300.000	0.384	314.318	299.991	1.358	-1.686	1.358	2.165	308.858	0.195
400.000	0.297	307.923	399.989	1.752	-2.130	1.752	2.758	309.433	0.095
500.000	0.379	298.089	499.988	2.067	-2.627	2.067	3.343	308.200	0.100
600.000	0.348	228.190	599.986	2.020	-3.145	2.020	3.738	302.713	0.418
700.000	0.605	222.819	699.982	1.430	-3.731	1.430	3.996	290.974	0.260
800.000	0.922	225.382	799.973	0.478	-4.662	0.478	4.687	275.854	0.318
900.000	0.906	218.460	899.961	-0.706	-5.727	-0.706	5.770	262.972	0.111
1000.000	0.995	232.284	999.947	-1.856	-6.905	-1.856	7.150	254.954	0.245
1100.000	1.139	218.261	1099.930	-3.168	-8.208	-3.168	8.798	248.895	0.297
1200.000	1.150	220.343	1199.910	-4.713	-9.473	-4.713	10.581	243.547	0.043
1300.000	1.063	222.678	1299.891	-6.161	-10.752	-6.161	12.392	240.188	0.098
1400.000	1.116	238.910	1399.874	-7.345	-12.214	-7.345	14.253	238.978	0.312
1500.000	1.038	255.142	1499.856	-8.081	-13.924	-8.081	16.099	239.872	0.314
1600.000	1.169	265.719	1599.838	-8.389	-15.817	-8.389	17.904	242.059	0.242
1700.000	1.518	275.188	1699.810	-8.345	-18.153	-8.345	19.979	245.311	0.412
1800.000	1.603	274.681	1799.773	-8.112	-20.866	-8.112	22.387	248.757	0.087
1900.000	1.599	274.648	1899.734	-7.884	-23.651	-7.884	24.930	251.563	0.005
2000.000	1.343	263.378	1999.701	-7.907	-26.205	-7.907	27.372	253.211	0.385
2100.000	1.220	258.542	2099.676	-8.253	-28.413	-8.253	29.587	253.803	0.164
2200.000	0.800	274.104	2199.661	-8.415	-30.153	-8.415	31.305	254.407	0.498
2300.000	0.699	260.835	2299.652	-8.462	-31.451	-8.462	32.570	254.941	0.200
2400.000	0.668	256.207	2399.645	-8.698	-32.620	-8.698	33.759	255.070	0.063
2500.000	0.593	261.205	2499.639	-8.916	-33.697	-8.916	34.857	255.179	0.093
2600.000	0.538	258.309	2599.634	-9.090	-34.668	-9.090	35.840	255.307	0.062
2700.000	0.709	269.643	2699.628	-9.189	-35.746	-9.189	36.908	255.583	0.210
2800.000	0.995	263.789	2799.617	-9.287	-37.228	-9.287	38.369	255.993	0.299
2900.000	1.287	258.548	2899.597	-9.604	-39.192	-9.604	40.352	256.231	0.310
3000.000	1.533	262.266	2999.567	-10.007	-41.619	-10.007	42.805	256.480	0.262
3100.000	1.685	269.156	3099.527	-10.209	-44.414	-10.209	45.573	257.055	0.246
3200.000	1.566	267.336	3199.487	-10.294	-47.249	-10.294	48.358	257.709	0.130
3300.000	1.041	264.335	3299.461	-10.447	-49.518	-10.447	50.608	258.087	0.529

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
3400.000	0.890	271.596	3399.447	-10.515	-51.198	-10.515	52.266	258.394	0.194
3500.000	0.842	273.934	3499.435	-10.443	-52.707	-10.443	53.731	258.793	0.059
3600.000	0.600	254.349	3599.427	-10.534	-53.944	-10.534	54.963	258.951	0.342
3700.000	0.822	236.218	3699.420	-11.074	-55.045	-11.074	56.147	258.625	0.313
3800.000	0.880	229.255	3799.409	-11.974	-56.223	-11.974	57.484	257.977	0.119
3900.000	1.067	223.563	3899.394	-13.151	-57.447	-13.151	58.933	257.106	0.210
4000.000	1.122	228.101	3999.376	-14.480	-58.818	-14.480	60.574	256.170	0.103
4100.000	0.905	194.550	4099.361	-15.898	-59.745	-15.898	61.824	255.099	0.621
4200.000	0.612	164.093	4199.353	-17.177	-59.797	-17.177	62.215	253.973	0.489
4300.000	0.558	186.569	4299.348	-18.175	-59.706	-18.175	62.411	253.070	0.234
4400.000	0.614	185.981	4399.342	-19.191	-59.818	-19.191	62.821	252.212	0.056
4500.000	0.780	191.650	4499.335	-20.391	-60.011	-20.391	63.381	251.233	0.180
4600.000	0.839	184.403	4599.325	-21.788	-60.205	-21.788	64.026	250.105	0.118
4700.000	0.775	183.962	4699.315	-23.192	-60.308	-23.192	64.614	248.965	0.064
4800.000	0.595	174.028	4799.308	-24.384	-60.301	-24.384	65.044	247.983	0.215
4900.000	0.445	200.786	4899.304	-25.264	-60.384	-25.264	65.457	247.296	0.282
5000.000	0.367	203.948	4999.301	-25.920	-60.652	-25.920	65.959	246.860	0.082
5100.000	0.330	237.221	5099.300	-26.368	-61.024	-26.368	66.477	246.631	0.203
5200.000	0.440	250.539	5199.297	-26.652	-61.628	-26.652	67.144	246.613	0.141
5300.000	0.286	281.999	5299.295	-26.728	-62.235	-26.728	67.731	246.758	0.246
5400.000	0.290	224.425	5399.294	-26.857	-62.656	-26.857	68.170	246.798	0.278
5500.000	0.300	223.332	5499.293	-27.228	-63.013	-27.228	68.644	246.631	0.011
5600.000	0.355	266.620	5599.292	-27.437	-63.502	-27.437	69.176	246.633	0.247
5700.000	0.319	261.075	5699.290	-27.498	-64.086	-27.498	69.737	246.777	0.048
5800.000	0.313	217.653	5799.288	-27.758	-64.529	-27.758	70.246	246.724	0.234
5900.000	0.407	208.796	5899.286	-28.285	-64.867	-28.285	70.765	246.440	0.109
6000.000	0.426	192.651	5999.284	-28.960	-65.119	-28.960	71.268	246.024	0.119
6100.000	0.411	227.132	6099.281	-29.567	-65.463	-29.567	71.831	245.694	0.249
6200.000	0.584	232.627	6199.278	-30.120	-66.131	-30.120	72.668	245.513	0.180
6300.000	0.625	236.060	6299.272	-30.734	-66.989	-30.734	73.703	245.355	0.054
6400.000	0.575	220.940	6399.267	-31.417	-67.770	-31.417	74.698	245.128	0.165
6500.000	0.769	224.866	6499.260	-32.272	-68.572	-32.272	75.786	244.797	0.199
6600.000	0.530	228.013	6599.253	-33.056	-69.388	-33.056	76.860	244.527	0.242
6700.000	0.280	194.673	6699.251	-33.602	-69.794	-33.602	77.461	244.292	0.334
6800.000	0.468	220.089	6799.249	-34.150	-70.119	-34.150	77.992	244.032	0.246
6900.000	0.260	225.266	6899.247	-34.622	-70.543	-34.622	78.581	243.858	0.210
7000.000	0.162	190.974	6999.246	-34.920	-70.731	-34.920	78.882	243.724	0.156
7100.000	0.352	195.141	7099.245	-35.356	-70.838	-35.356	79.171	243.476	0.191
7200.000	0.417	211.049	7199.243	-35.964	-71.106	-35.964	79.684	243.170	0.124
7300.000	0.089	170.291	7299.242	-36.353	-71.281	-36.353	80.015	242.979	0.355
7400.000	0.099	199.031	7399.241	-36.511	-71.296	-36.511	80.101	242.883	0.047
7500.000	0.072	27.755	7499.241	-36.536	-71.294	-36.536	80.111	242.866	0.171
7600.000	0.431	7.678	7599.240	-36.107	-71.215	-36.107	79.845	243.114	0.364

<div> HORIZONTAL DISPLACEMENT IS 79.845 FEET AT 243.114 DEGREES </div>
