



COMPANY: Anadarko Petroleum Corp  
WELL/API: Gurtler H24-21/05-123-29143  
TOOL TYPE: North Seeking Rate Gyro  
RIG NAME: Production/CoreTech  
COUNTY/STATE: Weld/Colorado  
Latitude: 40.210, Longitude: -104.612  
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\_run.ut

Minimum Curvature Method

Report Date/Time: 12/16/2014 / 09:18

LAT & LONG OBTAINED BY HANDHELD GPS AT WELLHEAD  
HANDHELD GPS REFERENCE: NAD 83/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	0.142	95.675	100.000	-0.012	0.124	-0.012	0.124	95.675	0.142
200.000	0.390	322.407	199.999	0.245	0.040	0.245	0.248	9.205	0.498
300.000	0.343	115.481	299.998	0.385	0.103	0.385	0.399	14.923	0.713
400.000	0.402	228.314	399.997	0.023	0.111	0.023	0.114	78.117	0.622
500.000	0.239	321.868	499.996	-0.046	-0.279	-0.046	0.283	260.733	0.480
600.000	0.434	199.307	599.995	-0.239	-0.533	-0.239	0.584	245.857	0.598
700.000	0.885	278.036	699.990	-0.489	-1.423	-0.489	1.504	251.046	0.906
800.000	0.952	310.019	799.978	0.154	-2.823	0.154	2.828	273.114	0.510
900.000	0.697	264.293	899.968	0.627	-4.065	0.627	4.113	278.775	0.683
1000.000	1.113	288.779	999.956	0.880	-5.590	0.880	5.659	278.944	0.560
1100.000	0.712	300.414	1099.943	1.507	-7.046	1.507	7.205	282.073	0.441
1200.000	0.758	287.428	1199.935	2.019	-8.212	2.019	8.457	283.815	0.173
1300.000	0.720	294.781	1299.927	2.481	-9.414	2.481	9.735	284.763	0.102
1400.000	0.690	296.757	1399.919	3.015	-10.522	3.015	10.945	285.991	0.038
1500.000	0.748	287.069	1499.911	3.478	-11.684	3.478	12.191	286.577	0.135
1600.000	0.690	286.600	1599.903	3.842	-12.885	3.842	13.446	286.602	0.059
1700.000	0.650	283.217	1699.897	4.144	-14.015	4.144	14.614	286.471	0.056
1800.000	0.652	246.676	1799.891	4.048	-15.090	4.048	15.623	285.016	0.408
1900.000	1.187	202.033	1899.878	2.863	-16.001	2.863	16.255	280.143	0.856
2000.000	1.754	190.395	1999.845	0.397	-16.665	0.397	16.670	271.366	0.639
2100.000	2.676	180.408	2099.770	-3.443	-16.958	-3.443	17.304	258.525	0.996
2200.000	3.010	170.952	2199.647	-8.370	-16.562	-8.370	18.557	243.188	0.575
2300.000	2.385	157.911	2299.537	-12.892	-15.366	-12.892	20.058	230.005	0.872
2400.000	1.889	163.853	2399.467	-16.403	-14.125	-16.403	21.647	220.732	0.543
2500.000	1.648	149.347	2499.420	-19.224	-12.934	-19.224	23.170	213.933	0.507
2600.000	1.489	116.652	2599.384	-21.043	-11.040	-21.043	23.763	207.682	0.896
2700.000	0.828	126.528	2699.363	-22.056	-9.298	-22.056	23.936	202.857	0.688
2800.000	0.796	88.360	2799.354	-22.467	-8.023	-22.467	23.856	199.651	0.532
2900.000	0.960	91.764	2899.342	-22.472	-6.491	-22.472	23.391	196.112	0.171
3000.000	0.325	60.188	2999.336	-22.357	-5.408	-22.357	23.002	193.598	0.703
3100.000	0.329	95.148	3099.334	-22.242	-4.876	-22.242	22.770	192.365	0.196
3200.000	0.251	105.926	3199.333	-22.328	-4.379	-22.328	22.753	191.097	0.094
3300.000	0.715	139.704	3299.329	-22.864	-3.765	-22.864	23.171	189.351	0.525
3400.000	1.234	141.840	3399.314	-24.186	-2.697	-24.186	24.335	186.362	0.520

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	0.857	111.641	3499.298	-25.308	-1.336	-25.308	25.343	183.022	0.655
3600.000	1.134	67.961	3599.285	-25.212	0.277	-25.212	25.214	179.371	0.784
3700.000	1.947	62.790	3699.248	-24.064	2.705	-24.064	24.216	173.587	0.824
3800.000	2.614	76.154	3799.169	-22.742	6.430	-22.742	23.633	164.212	0.849
3900.000	2.895	60.917	3899.054	-20.969	10.851	-20.969	23.610	152.639	0.781
4000.000	2.770	68.549	3998.932	-18.858	15.306	-18.858	24.288	140.935	0.397
4100.000	2.698	56.965	4098.819	-16.691	19.528	-16.691	25.689	130.522	0.556
4200.000	2.740	65.156	4198.707	-14.404	23.669	-14.404	27.708	121.323	0.391
4300.000	3.452	59.611	4298.561	-11.877	28.435	-11.877	30.816	112.670	0.771
4400.000	3.344	59.165	4398.385	-8.859	33.536	-8.859	34.687	104.798	0.111
4500.000	3.541	65.826	4498.205	-6.100	38.858	-6.100	39.334	98.921	0.445
4600.000	3.343	58.269	4598.025	-3.302	44.155	-3.302	44.278	94.276	0.495
4700.000	3.306	55.931	4697.857	-0.153	49.023	-0.153	49.023	90.179	0.140
4800.000	3.331	66.439	4797.690	2.623	54.074	2.623	54.138	87.223	0.608
4900.000	3.374	72.506	4897.519	4.669	59.544	4.669	59.727	85.516	0.357
5000.000	2.754	69.312	4997.376	6.402	64.598	6.402	64.915	84.340	0.642
5100.000	2.869	62.611	5097.256	8.403	69.068	8.403	69.577	83.064	0.348
5200.000	1.942	64.908	5197.167	10.273	72.825	10.273	73.546	81.971	0.932
5300.000	1.286	60.123	5297.126	11.550	75.332	11.550	76.213	81.283	0.670
5400.000	1.348	61.457	5397.100	12.671	77.339	12.671	78.370	80.695	0.070
5500.000	1.272	64.084	5497.074	13.718	79.370	13.718	80.547	80.194	0.097
5600.000	1.831	79.728	5597.037	14.488	81.940	14.488	83.211	79.973	0.697
5700.000	1.264	49.795	5697.002	15.485	84.355	15.485	85.764	79.598	0.969
5800.000	1.506	18.156	5796.974	17.446	85.607	17.446	87.366	78.481	0.790
5900.000	1.756	0.723	5896.934	20.226	86.036	20.226	88.381	76.770	0.552
6000.000	1.828	5.265	5996.885	23.346	86.201	23.346	89.307	74.846	0.159
6100.000	1.672	3.373	6096.839	26.391	86.433	26.391	90.373	73.021	0.166
6200.000	2.032	4.203	6196.786	29.616	86.649	29.616	91.571	71.130	0.361
6300.000	2.375	0.490	6296.712	33.456	86.797	33.456	93.021	68.921	0.371
6400.000	2.448	353.955	6396.624	37.652	86.590	37.652	94.422	66.499	0.285
6500.000	2.618	348.065	6496.526	42.010	85.892	42.010	95.616	63.937	0.310
6600.000	2.417	341.743	6596.430	46.247	84.759	46.247	96.556	61.382	0.342
6700.000	2.794	333.069	6696.327	50.423	82.995	50.423	97.111	58.720	0.545
6800.000	3.240	331.925	6796.188	55.090	80.561	55.090	97.596	55.635	0.450
6900.000	3.219	343.087	6896.030	60.269	78.414	60.269	98.900	52.454	0.628
7000.000	4.027	348.894	6995.830	66.401	76.921	66.401	101.616	49.198	0.887
HORIZONTAL DISPLACEMENT IS 101.616 FEET AT 49.198 DEGREES									