

Company: Anadarko Petroleum Corp.
 Well/API: Davis 12-15/ 05-123-21701
 Tool Type: North Seeking Rate Gyro
 Rig Name: Production/Coretech
 County/State: Weld County / Colorado
 Latitude: 40.224, Longitude: -104.884
 Directions are relative to True North
 VS-Azi: 0.000 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB = GL Elevation = 4795 Feet

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro_run01-01-de_01.ut

Minimum Curvature Method

Report Date/Time: 11/26/2014 / 12:46

Lat/Long Obtained By Handheld GPS At Wellhead
 Handheld GPS Reference: NAD83/Device Error: ±9 Feet
 VES Survey International - Henderson CO
 Jordan Rolando
 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	0.108	238.959	100.000	-0.048	-0.080	-0.048	0.094	238.959	0.108
200.000	0.460	225.142	199.999	-0.380	-0.445	-0.380	0.585	229.536	0.356
300.000	0.627	209.235	299.994	-1.140	-0.997	-1.140	1.514	221.159	0.224
400.000	0.916	218.815	399.985	-2.240	-1.765	-2.240	2.852	218.230	0.315
500.000	1.352	233.093	499.965	-3.571	-3.209	-3.571	4.801	221.941	0.516
600.000	2.151	245.768	599.918	-5.050	-5.864	-5.050	7.739	229.264	0.884
700.000	3.046	253.233	699.815	-6.587	-10.120	-6.587	12.075	236.939	0.955
800.000	3.161	271.539	799.670	-7.280	-15.421	-7.280	17.052	244.729	0.994
900.000	3.157	278.405	899.519	-6.803	-20.901	-6.803	21.980	251.971	0.378
1000.000	3.195	270.388	999.366	-6.382	-26.412	-6.382	27.172	256.416	0.445
1100.000	3.126	262.382	1099.214	-6.724	-31.901	-6.724	32.602	258.097	0.446
1200.000	2.953	259.219	1199.073	-7.568	-37.134	-7.568	37.897	258.481	0.241
1300.000	2.703	255.310	1298.952	-8.647	-41.945	-8.647	42.827	258.351	0.316
1400.000	2.373	258.312	1398.853	-9.665	-46.253	-9.665	47.252	258.198	0.355
1500.000	2.205	269.119	1498.774	-10.114	-50.205	-10.114	51.213	258.610	0.462
1600.000	1.729	275.681	1598.715	-9.994	-53.630	-9.994	54.553	259.444	0.526
1700.000	1.309	262.886	1698.680	-9.986	-56.265	-9.986	57.144	259.936	0.537
1800.000	1.027	273.548	1798.659	-10.072	-58.293	-10.072	59.157	260.197	0.355
1900.000	0.949	271.582	1898.644	-9.994	-60.016	-9.994	60.842	260.546	0.085
2000.000	0.956	251.687	1998.631	-10.233	-61.635	-10.233	62.479	260.574	0.329
2100.000	1.219	255.590	2098.613	-10.760	-63.458	-10.760	64.364	260.377	0.274
2200.000	2.106	258.045	2198.569	-11.405	-66.286	-11.405	67.260	260.237	0.889
2300.000	2.775	260.574	2298.478	-12.182	-70.472	-12.182	71.517	260.192	0.678
2400.000	2.861	251.402	2398.358	-13.375	-75.225	-13.375	76.405	259.918	0.458
2500.000	2.941	252.304	2498.230	-14.950	-80.034	-14.950	81.419	259.419	0.092
2600.000	2.682	254.498	2598.109	-16.355	-84.733	-16.355	86.297	259.075	0.281
2700.000	2.294	254.657	2698.015	-17.510	-88.917	-17.510	90.624	258.859	0.388
2800.000	2.243	263.468	2797.937	-18.262	-92.791	-18.262	94.571	258.866	0.352
2900.000	1.985	244.451	2897.870	-19.232	-96.298	-19.232	98.200	258.706	0.743
3000.000	1.993	237.284	2997.810	-20.919	-99.324	-20.919	101.503	258.107	0.249
3100.000	2.034	244.833	3097.748	-22.614	-102.394	-22.614	104.861	257.546	0.268
3200.000	2.259	221.558	3197.680	-24.843	-105.308	-24.843	108.198	256.726	0.893
3300.000	2.349	223.662	3297.599	-27.800	-108.030	-27.800	111.549	255.569	0.124

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	1.925	236.345	3397.530	-30.214	-110.843	-30.214	114.887	254.753	0.633
3500.000	1.532	226.384	3497.484	-32.066	-113.208	-32.066	117.662	254.185	0.493
3600.000	1.360	202.007	3597.453	-34.088	-114.620	-34.088	119.582	253.437	0.633
3700.000	1.556	208.816	3697.421	-36.377	-115.719	-36.377	121.302	252.549	0.261
3800.000	1.771	186.911	3797.380	-39.101	-116.559	-39.101	122.943	251.455	0.667
3900.000	2.182	196.846	3897.320	-42.457	-117.297	-42.457	124.744	250.102	0.533
4000.000	2.376	200.302	3997.241	-46.224	-118.568	-46.224	127.259	248.702	0.238
4100.000	2.187	201.967	4097.162	-49.938	-120.001	-49.938	129.977	247.406	0.201
4200.000	2.019	183.123	4197.096	-53.466	-120.811	-53.466	132.113	246.128	0.708
4300.000	1.838	201.269	4297.040	-56.720	-121.488	-56.720	134.077	244.973	0.634
4400.000	1.837	193.843	4396.989	-59.770	-122.454	-59.770	136.262	243.983	0.238
4500.000	1.817	168.334	4496.940	-62.879	-122.516	-62.879	137.710	242.832	0.807
4600.000	1.438	185.671	4596.900	-65.679	-122.320	-65.679	138.838	241.767	0.617
4700.000	1.394	188.201	4696.869	-68.132	-122.617	-68.132	140.275	240.942	0.076
4800.000	1.156	188.490	4796.844	-70.333	-122.940	-70.333	141.637	240.226	0.238
4900.000	1.215	227.320	4896.825	-72.049	-123.868	-72.049	143.298	239.815	0.790
5000.000	0.918	229.896	4996.807	-73.284	-125.261	-73.284	145.123	239.670	0.301
5100.000	1.290	221.260	5096.788	-74.646	-126.615	-74.646	146.981	239.478	0.406
5200.000	1.233	226.399	5196.764	-76.234	-128.137	-76.234	149.099	239.250	0.126
5300.000	1.231	241.674	5296.741	-77.486	-129.861	-77.486	151.221	239.176	0.327
5400.000	1.110	218.066	5396.721	-78.758	-131.404	-78.758	153.199	239.063	0.493
5500.000	1.074	230.842	5496.703	-80.113	-132.728	-80.113	155.032	238.885	0.246
5600.000	1.042	222.479	5596.686	-81.375	-134.069	-81.375	156.832	238.744	0.158
5700.000	0.985	200.273	5696.671	-82.852	-134.981	-82.852	158.380	238.458	0.394
5800.000	1.109	238.655	5796.655	-84.162	-136.105	-84.162	160.024	238.269	0.698
5900.000	1.121	224.319	5896.637	-85.365	-137.614	-85.365	161.941	238.188	0.278
6000.000	1.171	226.275	5996.617	-86.770	-139.036	-86.770	163.890	238.032	0.064
6100.000	1.442	221.995	6096.591	-88.411	-140.616	-88.411	166.100	237.841	0.288
6200.000	1.526	204.491	6196.557	-90.558	-142.009	-90.558	168.426	237.475	0.459
6300.000	1.454	221.183	6296.524	-92.724	-143.396	-92.724	170.764	237.112	0.438
6400.000	1.738	242.180	6396.486	-94.387	-145.573	-94.387	173.495	237.041	0.645
6500.000	2.356	261.702	6496.423	-95.391	-148.948	-95.391	176.875	237.363	0.923
6600.000	2.522	251.206	6596.333	-96.396	-153.064	-96.396	180.889	237.798	0.476
6700.000	2.220	262.231	6696.248	-97.367	-157.066	-97.367	184.797	238.205	0.546
6800.000	2.539	272.402	6796.162	-97.536	-161.198	-97.536	188.409	238.823	0.528
6900.000	2.938	284.518	6896.048	-96.801	-165.892	-96.801	192.069	239.736	0.701
7000.000	3.066	284.665	6995.911	-95.481	-170.960	-95.481	195.816	240.817	0.128

HORIZONTAL DISPLACEMENT IS
195.816 FEET AT 240.817 DEGREES