

Company: ANADARKO PETROLEUM
 Well: MAGNESS 16-26A
 API: 05-123-21161
 Rig Name: PRODUCTION/CORE-TECH
 State/County: COLORADO / WELD
 Latitude: 40.191, Longitude: -104.851
 Directions are relative to True North
 VS-Azi: 0.000 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB = GROUND LEVEL

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro_run01-01-de_01.ut

Minimum Curvature Method

Report Date/Time: 10/18/2013 / 10:32

VAUGHN ENERGY SERVICES

HENDERSON, COLORADO

303-853-4976

NICK KULA

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	0.838	61.196	99.996	0.353	0.641	0.353	0.732	61.196	0.838
200.000	0.646	23.516	199.989	1.222	1.507	1.222	1.941	50.962	0.513
300.000	0.496	91.290	299.985	1.730	2.165	1.730	2.771	51.376	0.649
400.000	0.458	224.579	399.983	1.435	2.317	1.435	2.726	58.223	0.876
500.000	0.637	166.578	499.979	0.610	2.166	0.610	2.250	74.277	0.554
600.000	0.427	207.989	599.975	-0.260	2.120	-0.260	2.136	97.000	0.425
700.000	0.572	241.646	699.972	-0.826	1.506	-0.826	1.718	118.745	0.321
800.000	0.537	175.678	799.968	-1.531	1.103	-1.531	1.886	144.231	0.604
900.000	0.462	236.743	899.965	-2.219	0.801	-2.219	2.359	160.152	0.512
1000.000	0.541	178.628	999.961	-2.912	0.475	-2.912	2.950	170.729	0.492
1100.000	0.715	218.778	1099.956	-3.870	0.096	-3.870	3.871	178.581	0.461
1200.000	0.519	189.888	1199.950	-4.802	-0.373	-4.802	4.817	184.437	0.362
1300.000	0.705	263.738	1299.946	-5.316	-1.062	-5.316	5.421	191.294	0.750
1400.000	0.748	262.158	1399.938	-5.472	-2.319	-5.472	5.943	202.968	0.047
1500.000	0.427	217.481	1499.933	-5.857	-3.192	-5.857	6.670	208.592	0.536
1600.000	0.775	261.938	1599.928	-6.248	-4.089	-6.248	7.467	213.202	0.557
1700.000	0.648	245.456	1699.920	-6.577	-5.272	-6.577	8.429	218.715	0.240
1800.000	0.473	300.479	1799.916	-6.603	-6.142	-6.603	9.018	222.929	0.540
1900.000	0.953	353.229	1899.909	-5.568	-6.595	-5.568	8.631	229.829	0.766
2000.000	1.660	326.294	1999.883	-3.537	-7.497	-3.537	8.290	244.744	0.919
2100.000	1.777	350.073	2099.839	-0.805	-8.569	-0.805	8.606	264.635	0.717
2200.000	1.784	349.118	2199.791	2.251	-9.130	2.251	9.403	283.850	0.030
2300.000	1.239	3.211	2299.756	4.858	-9.363	4.858	10.548	297.424	0.656
2400.000	1.524	23.533	2399.728	7.157	-8.772	7.157	11.321	309.211	0.562
2500.000	1.592	355.607	2499.692	9.760	-8.347	9.760	12.843	319.463	0.755
2600.000	0.935	14.905	2599.668	11.934	-8.243	11.934	14.504	325.365	0.773
2700.000	0.550	18.222	2699.659	13.179	-7.883	13.179	15.357	329.112	0.388
2800.000	0.476	13.268	2799.655	14.039	-7.638	14.039	15.982	331.451	0.086
2900.000	0.876	350.588	2899.648	15.197	-7.668	15.197	17.022	333.227	0.473

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
3000.000	0.565	280.502	2999.642	16.041	-8.277	16.041	18.050	332.706	0.865
3100.000	0.948	339.054	3099.634	16.904	-9.058	16.904	19.177	331.816	0.812
3200.000	0.644	266.186	3199.626	17.639	-9.914	17.639	20.234	330.661	0.977
3300.000	0.556	207.721	3299.622	17.172	-10.701	17.172	20.233	328.070	0.591
3400.000	1.030	161.029	3399.613	15.892	-10.635	15.892	19.122	326.210	0.764
3500.000	0.289	140.933	3499.606	14.846	-10.183	14.846	18.003	325.553	0.765
3600.000	0.534	89.112	3599.603	14.657	-9.558	14.657	17.498	326.891	0.422
3700.000	0.725	7.269	3699.599	15.292	-9.012	15.292	17.750	329.489	0.837
3800.000	1.086	326.897	3799.587	16.714	-9.449	16.714	19.200	330.518	0.711
3900.000	0.858	340.972	3899.573	18.216	-10.211	18.216	20.882	330.726	0.328
4000.000	0.977	284.475	3999.562	19.137	-11.281	19.137	22.214	329.481	0.875
4100.000	0.632	295.875	4099.552	19.591	-12.603	19.591	23.294	327.247	0.379
4200.000	0.507	26.464	4199.549	20.228	-12.902	20.228	23.992	327.469	0.815
4300.000	0.543	52.407	4299.545	20.913	-12.329	20.913	24.277	329.479	0.238
4400.000	1.384	34.852	4399.530	22.193	-11.264	22.193	24.888	333.091	0.881
4500.000	0.503	34.238	4499.515	23.547	-10.327	23.547	25.712	336.320	0.880
4600.000	0.867	21.324	4599.508	24.615	-9.804	24.615	26.496	338.282	0.393
4700.000	0.452	316.385	4699.502	25.606	-9.801	25.606	27.417	339.054	0.790
4800.000	1.173	314.469	4799.492	26.608	-10.804	26.608	28.718	337.901	0.722
4900.000	1.901	293.702	4899.456	27.993	-13.054	27.993	30.887	334.999	0.905
5000.000	1.510	301.227	4999.411	29.343	-15.700	29.343	33.279	331.851	0.450
5100.000	0.737	313.198	5099.391	30.466	-17.295	30.466	35.032	330.417	0.804
5200.000	0.863	301.232	5199.382	31.296	-18.408	31.296	36.308	329.537	0.209
5300.000	0.758	253.292	5299.373	31.497	-19.685	31.497	37.142	327.995	0.666
5400.000	0.538	295.629	5399.367	31.510	-20.742	31.510	37.724	326.645	0.511
5500.000	0.116	353.050	5499.365	31.814	-21.178	31.814	38.218	326.349	0.486
5600.000	0.180	146.231	5599.365	31.784	-21.103	31.784	38.151	326.418	0.288
5700.000	0.561	133.551	5699.363	31.315	-20.660	31.315	37.517	326.585	0.388
5800.000	1.217	94.351	5799.351	30.897	-19.246	30.897	36.401	328.081	0.858
5900.000	0.856	40.928	5899.337	31.381	-17.699	31.381	36.028	330.577	0.986
6000.000	0.759	355.695	5999.328	32.606	-17.259	32.606	36.892	332.106	0.627
6100.000	0.743	337.817	6099.319	33.867	-17.554	33.867	38.146	332.601	0.234
6200.000	0.248	195.042	6199.317	34.258	-17.855	34.258	38.632	332.472	0.953
6300.000	0.134	81.954	6299.316	34.065	-17.796	34.065	38.433	332.418	0.325
6400.000	0.161	63.758	6399.316	34.144	-17.554	34.144	38.392	332.792	0.054
6500.000	0.741	282.529	6499.314	34.346	-18.059	34.346	38.805	332.265	0.872
6600.000	0.392	231.287	6599.309	34.272	-18.957	34.272	39.166	331.052	0.582
6700.000	0.795	255.385	6699.304	33.883	-19.896	33.883	39.293	329.579	0.465
6800.000	0.527	272.313	6799.297	33.727	-21.027	33.727	39.744	328.059	0.329
6900.000	0.741	321.691	6899.292	34.253	-21.887	34.253	40.649	327.422	0.564
7000.000	0.217	155.775	6999.289	34.588	-22.211	34.588	41.105	327.293	0.953
7100.000	0.924	210.644	7099.284	33.721	-22.544	33.721	40.563	326.236	0.818
7200.000	0.565	219.678	7199.276	32.648	-23.270	32.648	40.092	324.521	0.376
7300.000	0.811	290.280	7299.270	32.514	-24.249	32.514	40.561	323.285	0.820
7400.000	1.756	280.836	7399.244	33.048	-26.417	33.048	42.309	321.362	0.964
7500.000	0.996	289.928	7499.214	33.632	-28.739	33.632	44.238	319.486	0.788
7600.000	1.154	307.680	7599.197	34.544	-30.353	34.544	45.984	318.695	0.367
7700.000	0.933	285.329	7699.181	35.375	-31.935	35.375	47.658	317.925	0.459
HORIZONTAL DISPLACEMENT IS 47.658 FEET AT 317.925 DEGREES									