



Company/ Rig: Noble Energy/ CoreTech  
Well/API#: Monfort Kuner B 26-7/05-123-12587  
Declination: 8.2 Degrees  
TD as Drilled: 7312 Feet  
County/State: Weld/Colorado  
VS-Azi: 0.000 Degrees  
Latitude: 40.37227, Longitude: -104.51448  
Grid North = True North -0.64 degs (NAD 27)  
Grid Correction Applied = -0.64 degs



Depth Reference : RKB= GL/ Elevation= 4589 Feet

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro\_run01-01-de\_01.ut

Minimum Curvature Method

Report Date/Time: 4/4/2016 / 16:01

Lat & Long Obtained by Handheld GPS at Wellhead

North Reference: Grid

Henderson, Colorado

303-853-4976

Surveyor: Sean Bratt / Monfort Kuner B 26-7

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	0.182	218.643	100.000	-0.124	-0.099	-0.124	0.159	218.643	0.182
200.000	0.271	248.022	199.999	-0.337	-0.418	-0.337	0.536	231.118	0.143
300.000	0.178	231.330	299.998	-0.522	-0.758	-0.522	0.920	235.434	0.113
400.000	0.117	73.699	399.998	-0.590	-0.781	-0.590	0.979	232.914	0.289
500.000	0.485	338.959	499.997	-0.167	-0.835	-0.167	0.852	258.694	0.508
600.000	0.266	345.794	599.995	0.453	-1.044	0.453	1.138	293.453	0.223
700.000	0.406	10.592	699.993	1.026	-1.036	1.026	1.458	314.719	0.198
800.000	0.524	358.994	799.990	1.831	-0.979	1.831	2.076	331.867	0.151
900.000	0.379	338.894	899.987	2.597	-1.106	2.597	2.823	336.927	0.213
1000.000	0.269	7.784	999.985	3.138	-1.193	3.138	3.357	339.178	0.194
1100.000	0.510	356.081	1099.983	3.815	-1.192	3.815	3.997	342.647	0.252
1200.000	0.367	336.747	1199.980	4.552	-1.349	4.552	4.748	343.496	0.203
1300.000	0.335	11.430	1299.978	5.133	-1.417	5.133	5.325	344.565	0.211
1400.000	0.469	349.482	1399.976	5.823	-1.434	5.823	5.997	346.164	0.202
1500.000	0.122	49.900	1499.974	6.294	-1.427	6.294	6.454	347.224	0.423
1600.000	0.325	9.627	1599.974	6.643	-1.298	6.643	6.768	348.941	0.245
1700.000	0.137	186.163	1699.973	6.803	-1.264	6.803	6.920	349.478	0.461
1800.000	0.212	243.202	1799.973	6.601	-1.442	6.601	6.757	347.680	0.179

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	0.604	172.071	1899.970	5.996	-1.534	5.996	6.189	345.646	0.572
2000.000	0.647	168.040	1999.965	4.921	-1.344	4.921	5.101	344.719	0.062
2100.000	0.827	183.677	2099.956	3.648	-1.274	3.648	3.864	340.752	0.268
2200.000	1.031	189.097	2199.943	2.039	-1.462	2.039	2.509	324.352	0.222
2300.000	0.977	195.522	2299.928	0.329	-1.833	0.329	1.862	280.184	0.125
2400.000	1.026	194.354	2399.912	-1.360	-2.283	-1.360	2.657	239.221	0.054
2500.000	0.855	189.374	2499.899	-2.964	-2.626	-2.964	3.960	221.548	0.190
2600.000	0.869	186.710	2599.888	-4.453	-2.836	-4.453	5.280	212.496	0.043
2700.000	0.824	192.265	2699.877	-5.909	-3.078	-5.909	6.662	207.514	0.094
2800.000	0.748	202.816	2799.867	-7.213	-3.484	-7.213	8.010	205.779	0.163
2900.000	0.736	204.104	2899.859	-8.401	-3.999	-8.401	9.304	205.455	0.020
3000.000	0.781	202.258	2999.850	-9.618	-4.520	-9.618	10.627	205.169	0.051
3100.000	0.638	189.274	3099.843	-10.799	-4.868	-10.799	11.845	204.264	0.215
3200.000	0.568	196.852	3199.837	-11.822	-5.101	-11.822	12.876	203.339	0.106
3300.000	0.855	222.839	3299.830	-12.844	-5.752	-12.844	14.073	204.125	0.425
3400.000	0.745	234.464	3399.820	-13.768	-6.788	-13.768	15.351	206.244	0.196
3500.000	0.804	213.997	3499.811	-14.728	-7.709	-14.728	16.623	207.629	0.281
3600.000	0.889	221.233	3599.800	-15.893	-8.613	-15.893	18.077	208.454	0.137
3700.000	0.995	229.920	3699.787	-17.035	-9.789	-17.035	19.647	209.882	0.178
3800.000	1.041	231.588	3799.771	-18.159	-11.165	-18.159	21.317	211.585	0.055
3900.000	1.337	237.644	3899.749	-19.348	-12.862	-19.348	23.233	213.615	0.320
4000.000	1.478	230.858	3999.719	-20.786	-14.848	-20.786	25.544	215.538	0.218
4100.000	1.836	228.116	4099.677	-22.670	-17.041	-22.670	28.360	216.932	0.367
4200.000	1.844	229.172	4199.625	-24.791	-19.451	-24.791	31.511	218.117	0.035
4300.000	1.983	228.605	4299.570	-26.987	-21.966	-26.987	34.797	219.144	0.140
4400.000	1.479	230.653	4399.524	-28.950	-24.262	-28.950	37.772	219.966	0.508
4500.000	0.674	215.169	4499.505	-30.248	-25.598	-30.248	39.626	220.241	0.849
4600.000	0.628	208.572	4599.499	-31.210	-26.199	-31.210	40.748	220.012	0.088
4700.000	0.359	205.169	4699.495	-31.974	-26.594	-31.974	41.589	219.752	0.271
4800.000	0.480	206.761	4799.493	-32.632	-26.916	-32.632	42.300	219.517	0.122
4900.000	0.693	208.263	4899.487	-33.539	-27.391	-33.539	43.303	219.239	0.213
5000.000	0.561	234.390	4999.481	-34.356	-28.075	-34.356	44.368	219.255	0.311
5100.000	0.633	266.563	5099.476	-34.674	-29.024	-34.674	45.218	219.931	0.338
5200.000	0.580	279.614	5199.471	-34.623	-30.075	-34.623	45.861	220.979	0.148
5300.000	0.863	318.780	5299.463	-33.972	-31.070	-33.972	46.037	222.445	0.552
5400.000	0.987	320.985	5399.450	-32.736	-32.108	-32.736	45.854	224.445	0.129
5500.000	1.045	310.793	5499.435	-31.471	-33.341	-31.471	45.848	226.653	0.190
5600.000	1.118	303.148	5599.417	-30.342	-34.848	-30.342	46.206	228.955	0.161
5700.000	0.974	304.576	5699.400	-29.326	-36.364	-29.326	46.716	231.115	0.146
5800.000	0.762	327.162	5799.389	-28.286	-37.425	-28.286	46.911	232.918	0.398

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	0.966	339.375	5899.378	-26.938	-38.082	-26.938	46.647	234.725	0.274
6000.000	0.963	347.384	5999.363	-25.329	-38.562	-25.329	46.137	236.701	0.135
6100.000	0.873	357.553	6099.351	-23.748	-38.778	-23.748	45.472	238.516	0.186
6200.000	1.216	352.802	6199.334	-21.935	-38.944	-21.935	44.696	240.610	0.353
6300.000	0.809	340.774	6299.318	-20.216	-39.309	-20.216	44.203	242.784	0.457
6400.000	0.770	346.547	6399.309	-18.896	-39.698	-18.896	43.966	244.545	0.089
6500.000	1.072	337.303	6499.296	-17.380	-40.215	-17.380	43.810	246.627	0.336
6600.000	0.883	335.428	6599.281	-15.816	-40.896	-15.816	43.848	248.857	0.192
6700.000	0.823	340.887	6699.270	-14.437	-41.452	-14.437	43.894	250.797	0.101
6750.000	0.728	341.012	6749.266	-13.798	-41.673	-13.798	43.898	251.680	0.191