



Company: Noble Energy

Well: Schmidt 25-1F

API: 05-123-16147

Rig Name: Production/Lightning

Location: Weld County, Colorado

Latitude: 40.288, Longitude: -104.718

GRID North is 0.510 Degrees East of 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: 1/4/2013 / 10:42

Vaughn Energy Services

Henderson, CO.

Justin Williams

303-853-4976

RKB = Ground Level

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	0.199	300.280	100.000	0.088	-0.150	0.088	0.174	300.280	0.199
200.000	0.401	170.580	199.999	-0.170	-0.243	-0.170	0.296	234.927	0.550
300.000	0.606	176.324	299.995	-1.044	-0.151	-1.044	1.055	188.249	0.211
400.000	0.253	282.950	399.993	-1.522	-0.332	-1.522	1.558	192.312	0.721
500.000	0.604	180.656	499.991	-2.000	-0.553	-2.000	2.075	195.462	0.702
600.000	0.697	200.573	599.985	-3.096	-0.773	-3.096	3.191	194.017	0.243
700.000	0.810	215.753	699.976	-4.239	-1.399	-4.239	4.464	198.271	0.228
800.000	0.852	219.793	799.966	-5.383	-2.288	-5.383	5.849	203.027	0.072
900.000	0.837	251.582	899.955	-6.185	-3.457	-6.185	7.086	209.202	0.463
1000.000	0.797	221.990	999.946	-6.933	-4.616	-6.933	8.329	213.654	0.419
1100.000	0.669	241.731	1099.938	-7.726	-5.595	-7.726	9.539	215.910	0.281
1200.000	0.155	301.854	1199.935	-7.931	-6.224	-7.931	10.082	218.123	0.607
1300.000	0.485	257.278	1299.933	-7.953	-6.752	-7.953	10.433	220.329	0.390
1400.000	0.255	333.244	1399.932	-7.848	-7.264	-7.848	10.694	222.789	0.490
1500.000	0.231	188.217	1499.931	-7.849	-7.393	-7.849	10.783	223.287	0.464
1600.000	0.244	180.739	1599.931	-8.262	-7.425	-8.262	11.108	221.946	0.034
1700.000	0.524	241.326	1699.929	-8.694	-7.828	-8.694	11.699	222.001	0.456
1800.000	0.799	251.882	1799.922	-9.130	-8.892	-9.130	12.745	224.243	0.300
1900.000	0.477	243.993	1899.915	-9.530	-9.929	-9.530	13.763	226.176	0.334
2000.000	0.728	239.722	1999.910	-10.032	-10.852	-10.032	14.779	227.247	0.254
2100.000	0.559	267.652	2099.904	-10.372	-11.887	-10.372	15.776	228.893	0.351
2200.000	0.729	298.981	2199.898	-10.084	-12.931	-10.084	16.398	232.051	0.384
2300.000	0.843	306.159	2299.888	-9.342	-14.081	-9.342	16.898	236.437	0.150
2400.000	1.403	325.290	2399.869	-7.902	-15.372	-7.902	17.284	242.794	0.667
2500.000	0.846	329.444	2499.849	-6.260	-16.444	-6.260	17.596	249.159	0.563
2600.000	1.351	328.501	2599.831	-4.620	-17.435	-4.620	18.037	255.160	0.505
2700.000	0.907	343.185	2699.811	-2.857	-18.280	-2.857	18.502	261.117	0.526
2800.000	1.265	322.840	2799.794	-1.220	-19.176	-1.220	19.214	266.359	0.521
2900.000	1.277	347.961	2899.770	0.750	-20.075	0.750	20.089	272.138	0.553
3000.000	0.842	342.383	2999.752	2.540	-20.529	2.540	20.686	277.052	0.447
3100.000	1.298	332.923	3099.735	4.248	-21.267	4.248	21.687	281.296	0.488
3200.000	1.061	325.661	3199.714	6.021	-22.305	6.021	23.103	285.107	0.280
3300.000	0.870	355.353	3299.700	7.542	-22.889	7.542	24.099	288.238	0.528
3400.000	0.734	333.270	3399.690	8.871	-23.238	8.871	24.874	290.894	0.335

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	0.778	343.658	3499.682	10.094	-23.717	10.094	25.776	293.055	0.144
3600.000	0.689	343.858	3599.674	11.323	-24.075	11.323	26.605	295.188	0.089
3700.000	0.713	359.003	3699.666	12.523	-24.253	12.523	27.295	297.309	0.186
3800.000	0.483	14.041	3799.661	13.554	-24.162	13.554	27.704	299.290	0.277
3900.000	0.576	349.027	3899.657	14.456	-24.155	14.456	28.150	300.898	0.247
4000.000	0.336	304.566	3999.654	15.115	-24.493	15.115	28.781	301.680	0.410
4100.000	0.591	323.729	4099.650	15.698	-25.039	15.698	29.553	302.084	0.295
4200.000	0.223	347.918	4199.648	16.303	-25.385	16.303	30.170	302.710	0.398
4300.000	0.545	339.602	4299.645	16.939	-25.592	16.939	30.690	303.501	0.327
4400.000	0.209	347.321	4399.643	17.564	-25.798	17.564	31.209	304.248	0.339
4500.000	0.570	308.111	4499.641	18.049	-26.229	18.049	31.839	304.533	0.429
4600.000	0.343	29.175	4599.638	18.617	-26.475	18.617	32.365	305.115	0.618
4700.000	0.787	57.270	4699.633	19.249	-25.751	19.249	32.150	306.779	0.511
4800.000	1.368	64.376	4799.615	20.137	-24.097	20.137	31.403	309.884	0.594
4900.000	2.176	55.351	4899.567	21.732	-21.459	21.732	30.542	315.362	0.853
5000.000	1.856	50.917	4999.505	23.833	-18.640	23.833	30.257	321.970	0.356
5100.000	1.600	44.363	5099.459	25.852	-16.407	25.852	30.619	327.598	0.323
5200.000	1.197	15.737	5199.430	27.855	-15.148	27.855	31.707	331.462	0.794
5300.000	1.066	6.046	5299.411	29.785	-14.767	29.785	33.244	333.629	0.232
5400.000	1.131	11.359	5399.393	31.678	-14.474	31.678	34.828	335.443	0.121
5500.000	0.982	11.382	5499.376	33.485	-14.111	33.485	36.337	337.149	0.150
5600.000	0.887	356.555	5599.363	35.098	-13.988	35.098	37.782	338.270	0.259
5700.000	1.164	357.294	5699.346	36.884	-14.083	36.884	39.481	339.103	0.277
5800.000	1.436	333.095	5799.321	39.015	-14.697	39.015	41.692	339.358	0.606
5900.000	1.431	351.547	5899.291	41.368	-15.448	41.368	44.158	339.523	0.460
6000.000	1.166	346.028	5999.265	43.591	-15.877	43.591	46.392	339.987	0.293
6100.000	1.222	341.863	6099.243	45.591	-16.455	45.591	48.470	340.155	0.103
6200.000	0.663	5.426	6199.230	47.181	-16.732	47.181	50.060	340.474	0.669
6300.000	0.527	342.659	6299.224	48.196	-16.814	48.196	51.045	340.768	0.270
6400.000	0.514	8.482	6399.220	49.079	-16.885	49.079	51.902	341.015	0.233
6500.000	0.306	181.228	6499.219	49.256	-16.824	49.256	52.050	341.141	0.819
6600.000	0.466	185.665	6599.217	48.584	-16.870	48.584	51.430	340.851	0.163
6700.000	0.573	177.344	6699.213	47.680	-16.887	47.680	50.582	340.497	0.131
6800.000	0.817	184.754	6799.205	46.470	-16.923	46.470	49.456	339.990	0.259
6900.000	0.907	184.560	6899.194	44.971	-17.045	44.971	48.093	339.242	0.090
7000.000	1.039	190.690	6999.180	43.292	-17.276	43.292	46.612	338.245	0.168
7100.000	0.832	207.416	7099.167	41.756	-17.779	41.756	45.383	336.937	0.340
HORIZONTAL DISPLACEMENT IS 45.383 FEET AT 336.937 DEGREES									