



Company/Rig: Noble Energy/ CoreTech
WELL/API#: DIETRICH 6-10/05-123-17359
DECLINATION: 8.22 Degrees
TD AS DRILLED: 7224'
COUNTY/STATE: WELD/COLORADO
VS-Azi: 0.000 Degrees
Latitude: 40.33894, Longitude: -104.59087
Grid North = True North -0.59 degs (NAD 27)
Grid Correction Applied = -0.59 degs



Depth Reference : RKB=SURFACE ELEVATION=4806'

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: run1-01-de_01.ut

Minimum Curvature Method

Report Date/Time: 6/1/2016 / 15:11

LAT & LONG OBTAINED BY HANDHELD GPS AT WELLHEAD

NORTH REFERENCE: GRID

HENDERSON, COLORADO

303-853-4976

Surveyor: JAY HINMAN / Dietrich 6-10

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	0.280	323.174	100.000	0.196	-0.147	0.196	0.245	323.174	0.280
200.000	0.194	269.126	199.999	0.389	-0.463	0.389	0.605	310.046	0.229
300.000	0.153	150.475	299.999	0.271	-0.567	0.271	0.628	295.510	0.299
400.000	0.186	61.533	399.998	0.232	-0.359	0.232	0.427	302.913	0.239
500.000	0.254	242.431	499.998	0.207	-0.412	0.207	0.461	296.697	0.440
600.000	0.428	250.455	599.996	-0.020	-0.960	-0.020	0.960	268.799	0.180
700.000	0.688	264.930	699.991	-0.198	-1.909	-0.198	1.919	264.079	0.294
800.000	0.691	260.993	799.984	-0.345	-3.102	-0.345	3.122	263.647	0.047
900.000	0.619	217.434	899.978	-0.869	-4.026	-0.869	4.119	257.822	0.491
1000.000	0.753	247.276	999.971	-1.552	-4.961	-1.552	5.198	252.629	0.376
1100.000	0.769	242.981	1099.963	-2.111	-6.165	-2.111	6.516	251.101	0.059
1200.000	0.494	219.302	1199.957	-2.749	-7.036	-2.749	7.554	248.659	0.374
1300.000	0.622	248.418	1299.952	-3.282	-7.814	-3.282	8.475	247.216	0.307
1400.000	0.445	203.093	1399.948	-3.839	-8.471	-3.839	9.300	245.622	0.443
1500.000	0.614	241.683	1499.944	-4.450	-9.094	-4.450	10.125	243.929	0.385
1600.000	0.491	225.521	1599.939	-5.004	-9.872	-5.004	11.068	243.120	0.197
1700.000	0.267	244.568	1699.937	-5.404	-10.388	-5.404	11.709	242.515	0.254
1800.000	0.323	333.813	1799.936	-5.251	-10.722	-5.251	11.939	243.907	0.416

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	0.438	323.776	1899.934	-4.690	-11.072	-4.690	12.025	247.043	0.132
2000.000	0.500	312.728	1999.931	-4.086	-11.619	-4.086	12.316	250.624	0.109
2100.000	0.509	325.779	2099.927	-3.423	-12.189	-3.423	12.660	254.314	0.115
2200.000	0.554	328.814	2199.923	-2.642	-12.689	-2.642	12.961	258.237	0.053
2300.000	0.617	293.592	2299.918	-2.013	-13.432	-2.013	13.582	261.476	0.359
2400.000	0.512	296.392	2399.913	-1.599	-14.326	-1.599	14.415	263.630	0.109
2500.000	0.606	302.990	2499.908	-1.113	-15.170	-1.113	15.210	265.805	0.114
2600.000	0.799	275.478	2599.901	-0.758	-16.307	-0.758	16.325	267.338	0.383
2700.000	0.792	277.555	2699.891	-0.601	-17.687	-0.601	17.697	268.055	0.030
2800.000	0.876	262.727	2799.881	-0.607	-19.131	-0.607	19.140	268.184	0.231
2900.000	0.656	262.169	2899.872	-0.781	-20.456	-0.781	20.471	267.812	0.220
3000.000	0.656	260.377	2999.865	-0.955	-21.587	-0.955	21.609	267.467	0.021
3100.000	0.857	288.544	3099.857	-0.813	-22.861	-0.813	22.875	267.964	0.417
3200.000	0.942	282.224	3199.844	-0.401	-24.373	-0.401	24.377	269.058	0.130
3300.000	0.921	290.836	3299.831	0.059	-25.927	0.059	25.928	270.130	0.141
3400.000	0.829	282.373	3399.820	0.500	-27.385	0.500	27.389	271.046	0.159
3500.000	0.981	283.465	3499.807	0.854	-28.923	0.854	28.936	271.691	0.153
3600.000	1.194	259.053	3599.790	0.855	-30.779	0.855	30.791	271.592	0.505
3700.000	1.303	266.031	3699.766	0.579	-32.937	0.579	32.942	271.007	0.187
3800.000	1.197	266.348	3799.742	0.434	-35.114	0.434	35.116	270.707	0.106
3900.000	1.326	259.635	3899.718	0.159	-37.295	0.159	37.295	270.244	0.196
4000.000	1.216	258.780	3999.693	-0.256	-39.473	-0.256	39.474	269.629	0.112
4100.000	1.343	250.388	4099.668	-0.855	-41.617	-0.855	41.626	268.823	0.226
4200.000	1.666	243.469	4199.634	-1.898	-44.021	-1.898	44.062	267.531	0.370
4300.000	2.253	243.532	4299.575	-3.423	-47.081	-3.423	47.205	265.842	0.587
4400.000	3.000	248.150	4399.469	-5.273	-51.270	-5.273	51.540	264.128	0.776
4500.000	2.950	233.415	4499.336	-7.781	-55.765	-7.781	56.305	262.057	0.764
4600.000	2.472	222.130	4599.225	-10.914	-59.278	-10.914	60.274	259.568	0.714
4700.000	2.897	203.922	4699.116	-14.823	-61.749	-14.823	63.503	256.501	0.948
4800.000	2.960	186.968	4798.988	-19.696	-63.087	-19.696	66.090	252.662	0.865
4900.000	3.052	187.293	4898.850	-24.899	-63.738	-24.899	68.429	248.662	0.094
5000.000	2.832	188.480	4998.718	-29.982	-64.440	-29.982	71.074	245.049	0.229
5100.000	2.547	179.658	5098.608	-34.647	-64.791	-34.647	73.473	241.864	0.501
5200.000	2.083	181.522	5198.527	-38.686	-64.826	-38.686	75.492	239.173	0.470
5300.000	1.638	185.797	5298.474	-41.924	-65.019	-41.924	77.363	237.186	0.466
5400.000	1.179	192.144	5398.443	-44.352	-65.379	-44.352	79.004	235.848	0.484
5500.000	0.624	196.067	5498.431	-45.880	-65.746	-45.880	80.172	235.091	0.558
5600.000	0.375	89.661	5598.428	-46.401	-65.570	-46.401	80.327	234.714	0.813
5700.000	0.325	27.645	5698.427	-46.148	-65.111	-46.148	79.806	234.673	0.363
5800.000	0.182	78.212	5798.426	-45.864	-64.823	-45.864	79.408	234.720	0.252

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	0.146	182.016	5898.426	-45.959	-64.672	-45.959	79.339	234.601	0.260
6000.000	0.386	220.248	5998.424	-46.344	-64.894	-46.344	79.743	234.468	0.286
6100.000	0.821	203.880	6098.419	-47.255	-65.401	-47.255	80.687	234.150	0.464
6200.000	0.687	215.518	6198.410	-48.398	-66.040	-48.398	81.876	233.764	0.203
6300.000	0.776	209.966	6298.402	-49.472	-66.726	-49.472	83.066	233.446	0.114
6400.000	1.207	221.949	6398.387	-50.842	-67.768	-50.842	84.720	233.121	0.476
6500.000	1.425	205.712	6498.361	-52.745	-69.011	-52.745	86.860	232.609	0.430
6600.000	1.733	212.978	6598.323	-55.134	-70.374	-55.134	89.399	231.923	0.367
6700.000	2.138	200.724	6698.266	-58.147	-71.857	-58.147	92.437	231.020	0.577
6800.000	2.235	208.418	6798.193	-61.606	-73.445	-61.606	95.862	230.010	0.309
6900.000	2.018	211.338	6898.124	-64.825	-75.288	-64.825	99.351	229.271	0.242
6950.000	1.772	202.265	6948.097	-66.292	-76.039	-66.292	100.879	228.918	0.775