



Company/Rig: NOBLE ENERGY/ Coretech
WELL/API#: Wilkinson 1-33/05-123-24134
DECLINATION: 8.33
TD AS DRILLED: 7287
COUNTY/STATE: Weld/COLORADO
VS-Azi: 0.000 Degrees
Latitude: 40.50965, Longitude: -104.61762
Grid North = True North -0.57 degs (NAD 27)
Grid Correction Applied = -0.57 degs



DEPTH REFERENCE : RKB=SURFACE ELEVATION= 4763

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro_6200-01-de_01.ut
Minimum Curvature Method
Report Date/Time: 8/28/2015 / 09:38

LAT & LONG OBTAINED BY HANDHELD GPS AT WELLHEAD

NORTH REFERENCE: GRID
HENDERSON, COLORADO
303-853-4976

Surveyor: BRIAN BREWBAKER

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	0.373	189.803	99.999	-0.321	-0.055	-0.321	0.325	189.803	0.373
200.000	0.104	250.919	199.998	-0.671	-0.197	-0.671	0.699	196.327	0.335
300.000	0.265	221.552	299.998	-0.873	-0.435	-0.873	0.976	206.499	0.181
400.000	0.134	210.187	399.997	-1.147	-0.647	-1.147	1.317	209.435	0.136
500.000	0.402	322.864	499.996	-0.969	-0.918	-0.969	1.334	223.446	0.470
600.000	0.560	326.628	599.993	-0.281	-1.398	-0.281	1.426	258.624	0.162
700.000	0.459	300.721	699.989	0.331	-2.011	0.331	2.038	279.357	0.249
800.000	0.600	308.882	799.985	0.865	-2.763	0.865	2.895	287.379	0.160
900.000	0.868	325.688	899.977	1.819	-3.598	1.819	4.032	296.825	0.341
1000.000	0.891	319.689	999.965	3.038	-4.528	3.038	5.453	303.860	0.095
1100.000	1.096	325.081	1099.950	4.415	-5.579	4.415	7.115	308.360	0.225
1200.000	1.129	327.404	1199.931	6.030	-6.657	6.030	8.982	312.169	0.056
1300.000	1.318	323.956	1299.908	7.790	-7.865	7.790	11.070	314.727	0.203
1400.000	1.408	323.331	1399.880	9.705	-9.275	9.705	13.425	316.299	0.091
1500.000	1.724	327.088	1499.842	11.954	-10.826	11.954	16.127	317.834	0.332
1600.000	1.741	323.192	1599.797	14.433	-12.554	14.433	19.128	318.983	0.119
1700.000	1.788	327.791	1699.749	16.969	-14.295	16.969	22.188	319.888	0.149
1800.000	1.719	327.230	1799.702	19.550	-15.939	19.550	25.224	320.810	0.070

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	1.606	326.395	1899.660	21.979	-17.526	21.979	28.111	321.430	0.116
2000.000	1.427	324.472	1999.625	24.159	-19.026	24.159	30.751	321.779	0.186
2100.000	1.489	327.126	2099.593	26.264	-20.455	26.264	33.290	322.088	0.091
2200.000	0.996	347.118	2199.570	28.203	-21.354	28.203	35.374	322.869	0.649
2300.000	0.770	341.811	2299.558	29.688	-21.757	29.688	36.807	323.764	0.241
2400.000	0.863	324.868	2399.548	30.942	-22.400	30.942	38.199	324.098	0.258
2500.000	0.467	308.673	2499.541	31.813	-23.152	31.813	39.346	323.955	0.435
2600.000	0.699	311.739	2599.536	32.474	-23.925	32.474	40.336	323.619	0.234
2700.000	0.676	289.525	2699.528	33.077	-24.936	33.077	41.423	322.988	0.266
2800.000	0.720	308.274	2799.521	33.663	-25.985	33.663	42.526	322.335	0.231
2900.000	0.514	303.894	2899.515	34.302	-26.851	34.302	43.562	321.947	0.211
3000.000	0.568	304.764	2999.511	34.835	-27.630	34.835	44.463	321.579	0.055
3100.000	0.722	297.373	3099.505	35.408	-28.598	35.408	45.514	321.073	0.175
3200.000	0.786	297.803	3199.496	36.017	-29.764	36.017	46.724	320.430	0.064
3300.000	0.802	293.776	3299.486	36.619	-31.011	36.619	47.986	319.741	0.058
3400.000	0.802	282.651	3399.477	37.055	-32.334	37.055	49.179	318.892	0.155
3500.000	0.866	282.779	3499.466	37.375	-33.754	37.375	50.361	317.915	0.063
3600.000	0.993	281.498	3599.453	37.715	-35.340	37.715	51.685	316.862	0.129
3700.000	1.126	275.625	3699.436	37.984	-37.167	37.984	53.143	315.623	0.171
3800.000	1.206	269.456	3799.415	38.070	-39.197	38.070	54.642	314.165	0.148
3900.000	1.198	268.443	3899.393	38.032	-41.294	38.032	56.139	312.645	0.022
4000.000	1.195	268.959	3999.371	37.985	-43.382	37.985	57.661	311.205	0.011
4100.000	1.149	271.894	4099.350	37.999	-45.427	37.999	59.224	309.912	0.075
4200.000	1.149	273.642	4199.330	38.096	-47.430	38.096	60.835	308.771	0.035
4300.000	0.949	265.358	4299.313	38.092	-49.257	38.092	62.267	307.716	0.250
4400.000	0.644	277.959	4399.304	38.103	-50.639	38.103	63.373	306.959	0.350
4500.000	0.514	263.806	4499.299	38.132	-51.642	38.132	64.195	306.442	0.192
4600.000	0.691	266.084	4599.293	38.043	-52.690	38.043	64.988	305.830	0.178
4700.000	0.718	265.315	4699.285	37.951	-53.915	37.951	65.933	305.141	0.029
4800.000	0.677	255.714	4799.278	37.754	-55.112	37.754	66.803	304.412	0.124
4900.000	0.817	259.723	4899.270	37.481	-56.387	37.481	67.707	303.612	0.150
5000.000	0.896	245.398	4999.259	37.028	-57.800	37.028	68.643	302.645	0.227
5100.000	0.784	244.043	5099.248	36.403	-59.126	36.403	69.434	301.620	0.113
5200.000	0.812	242.138	5199.238	35.772	-60.368	35.772	70.171	300.649	0.039
5300.000	0.700	230.391	5299.229	35.051	-61.465	35.051	70.757	299.694	0.191
5400.000	0.672	221.277	5399.222	34.221	-62.323	34.221	71.100	298.771	0.112
5500.000	0.627	201.793	5499.216	33.272	-62.913	33.272	71.169	297.873	0.224
5600.000	0.591	195.503	5599.210	32.267	-63.254	32.267	71.009	297.027	0.075
5700.000	0.365	177.687	5699.207	31.451	-63.379	31.451	70.754	296.392	0.268
5800.000	0.064	175.734	5799.206	31.077	-63.362	31.077	70.573	296.127	0.301

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	0.178	354.027	5899.206	31.176	-63.374	31.176	70.627	296.194	0.242
6000.000	0.345	358.163	5999.205	31.631	-63.400	31.631	70.852	296.515	0.168
6100.000	0.278	352.709	6099.203	32.173	-63.440	32.173	71.132	296.891	0.073
6200.000	0.265	20.650	6199.202	32.630	-63.389	32.630	71.295	297.237	0.132