



COMPANY/RIG: Noble Energy/Production/CoreTech
WELL/API: Moore UPRC G 15-7/05-123-18132
DECLINATION: 8.31 Degrees
TD AS DRILLED: 7183 Feet
COUNTY/STATE: Weld/Colorado
VS-Azi: 0.000 Degrees
Latitude: 40.31433, Longitude: -104.64633
Grid North = True North -0.55 degs (NAD 27)
Grid Correction Applied = -0.55 degs



DEPTH REFERENCE : RKB = GL Elevation = 4687

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyrosurvey.ut

Minimum Curvature Method

Report Date/Time: 10/21/2015 / 16:08

LAT & LONG OBTAINED BY HANDHELD GPS AT WELLHEAD

NORTH REFERENCE: GRID

HENDERSON, COLORADO

303-853-4976

Surveyor: JUSTIN WILLIAMS / Moore UPRC G 15-7

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	0.365	107.199	99.999	-0.094	0.304	-0.094	0.318	107.199	0.365
200.000	0.421	87.307	199.997	-0.171	0.976	-0.171	0.990	99.944	0.147
300.000	0.262	106.664	299.995	-0.219	1.562	-0.219	1.577	97.993	0.195
400.000	0.349	107.255	399.994	-0.375	2.071	-0.375	2.105	100.264	0.087
500.000	0.370	47.429	499.992	-0.247	2.599	-0.247	2.611	95.426	0.359
600.000	0.344	35.860	599.990	0.215	3.013	0.215	3.020	85.927	0.077
700.000	0.276	96.558	699.989	0.430	3.427	0.430	3.454	82.846	0.318
800.000	0.105	325.302	799.989	0.478	3.614	0.478	3.645	82.461	0.354
900.000	0.189	336.931	899.988	0.705	3.497	0.705	3.568	78.595	0.088
1000.000	0.250	250.597	999.988	0.784	3.226	0.784	3.320	76.337	0.304
1100.000	0.155	233.803	1099.987	0.632	2.911	0.632	2.979	77.754	0.111
1200.000	0.119	233.703	1199.987	0.491	2.718	0.491	2.762	79.769	0.036
1300.000	0.110	239.038	1299.987	0.380	2.553	0.380	2.581	81.534	0.014
1400.000	0.150	231.632	1399.986	0.249	2.368	0.249	2.381	83.990	0.043
1500.000	0.122	237.865	1499.986	0.111	2.174	0.111	2.177	87.075	0.031
1600.000	0.168	244.024	1599.986	-0.010	1.952	-0.010	1.952	90.293	0.048
1700.000	0.104	64.462	1699.986	-0.035	1.902	-0.035	1.903	91.055	0.272
1800.000	0.602	70.581	1799.984	0.179	2.479	0.179	2.486	85.878	0.498

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	0.751	81.822	1899.977	0.446	3.623	0.446	3.650	82.976	0.199
2000.000	0.755	94.999	1999.968	0.482	4.928	0.482	4.951	84.410	0.173
2100.000	0.945	103.875	2099.957	0.227	6.384	0.227	6.388	87.962	0.231
2200.000	0.582	113.411	2199.948	-0.173	7.651	-0.173	7.653	91.292	0.383
2300.000	0.724	146.465	2299.942	-0.901	8.466	-0.901	8.514	96.075	0.396
2400.000	0.905	163.055	2399.932	-2.183	9.046	-2.183	9.306	103.570	0.296
2500.000	1.449	174.294	2499.910	-4.198	9.402	-4.198	10.296	114.060	0.589
2600.000	1.572	167.952	2599.876	-6.798	9.814	-6.798	11.938	124.710	0.207
2700.000	1.501	179.520	2699.840	-9.450	10.111	-9.450	13.840	133.063	0.318
2800.000	1.264	179.420	2799.811	-11.862	10.133	-11.862	15.601	139.494	0.237
2900.000	1.268	194.783	2899.787	-14.035	9.862	-14.035	17.153	144.905	0.338
3000.000	1.466	199.174	2999.758	-16.313	9.160	-16.313	18.709	150.687	0.224
3100.000	1.184	216.914	3099.732	-18.348	8.119	-18.348	20.064	156.131	0.495
3200.000	1.127	212.603	3199.711	-20.002	6.968	-20.002	21.182	160.793	0.104
3300.000	1.173	221.003	3299.691	-21.603	5.767	-21.603	22.360	165.053	0.175
3400.000	1.275	221.390	3399.669	-23.210	4.360	-23.210	23.616	169.362	0.103
3500.000	0.785	224.330	3499.652	-24.536	3.145	-24.536	24.736	172.696	0.493
3600.000	0.587	244.774	3599.645	-25.244	2.203	-25.244	25.340	175.013	0.312
3700.000	0.617	261.882	3699.640	-25.539	1.206	-25.539	25.567	177.296	0.182
3800.000	0.711	259.705	3799.633	-25.725	0.063	-25.725	25.726	179.860	0.097
3900.000	0.886	276.867	3899.623	-25.744	-1.315	-25.744	25.778	182.924	0.294
4000.000	1.180	286.591	3999.607	-25.357	-3.069	-25.357	25.543	186.902	0.342
4100.000	1.486	304.840	4099.580	-24.323	-5.121	-24.323	24.856	191.889	0.520
4200.000	1.809	302.323	4199.539	-22.738	-7.519	-22.738	23.949	198.299	0.331
4250.000	1.728	298.577	4249.515	-21.955	-8.848	-21.955	23.671	201.950	0.282