



**Company:** Noble Energy  
**Rig:** Production / VES  
**API #** 05-123-15060

**Date:** 1/25/2014

**Surveyor:** CJ Hines

**VS:** 0.000

**Lat :** 40.22362

**Long:** -104.662

**Well:** Megan H #16-9

**Location:** Weld County, Colorado

**North Reference:** GRID

**Convergence:** Grid north is 0.54 East of True Noi

**Declination:** 8.44

**Depth Reference:** Ground Level

**Elevation:** 4818

**Total Depth as Drilled:** 7730

**Lat & Long obtained by handheld GPS at wellhead**

**Gyro Survey Calculations**

Depth	Inc	AzG	N/-S	E/-W	TVD	DL	VS	CD	Cbrg
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.000	0.132	233.713	-0.068	-0.093	100.000	0.132	-0.068	0.115	233.713
200.000	0.115	227.997	-0.204	-0.261	200.000	0.021	-0.204	0.331	231.976
300.000	0.115	223.444	-0.344	-0.404	299.999	0.009	-0.344	0.531	229.612
400.000	0.093	244.099	-0.453	-0.547	399.999	0.043	-0.453	0.710	230.387
500.000	0.233	72.749	-0.428	-0.426	499.999	0.326	-0.428	0.604	224.864
600.000	0.213	48.050	-0.243	-0.093	599.998	0.097	-0.243	0.260	200.947
700.000	0.353	74.857	-0.038	0.343	699.997	0.189	-0.038	0.345	96.388
800.000	0.353	87.697	0.054	0.948	799.995	0.079	0.054	0.949	86.710
900.000	0.237	79.700	0.104	1.459	899.994	0.123	0.104	1.462	85.930
1000.000	0.186	81.626	0.164	1.823	999.993	0.051	0.164	1.830	84.846
1100.000	0.115	69.605	0.223	2.078	1099.993	0.078	0.223	2.090	83.873
1200.000	0.083	58.048	0.297	2.233	1199.993	0.037	0.297	2.253	82.438
1300.000	0.117	70.105	0.370	2.391	1299.993	0.039	0.370	2.419	81.211
1400.000	0.044	85.706	0.407	2.524	1399.993	0.075	0.407	2.557	80.839
1500.000	0.059	155.542	0.363	2.584	1499.992	0.060	0.363	2.609	81.998
1600.000	0.057	323.961	0.356	2.576	1599.992	0.115	0.356	2.601	82.123
1700.000	0.156	248.442	0.346	2.420	1699.992	0.152	0.346	2.445	81.858
1800.000	0.262	252.508	0.227	2.076	1799.992	0.106	0.227	2.088	83.745
1900.000	0.125	223.458	0.080	1.783	1899.991	0.164	0.080	1.785	87.434
2000.000	0.119	258.734	-0.019	1.607	1999.991	0.074	-0.019	1.607	90.689
2100.000	0.509	289.913	0.112	1.087	2099.989	0.412	0.112	1.093	84.131
2200.000	0.647	320.194	0.697	0.308	2199.984	0.330	0.697	0.762	23.851
2300.000	1.019	320.763	1.819	-0.616	2299.974	0.372	1.819	1.921	341.301
2400.000	0.964	16.781	3.313	-0.935	2399.961	0.932	3.313	3.443	344.237
2500.000	0.994	18.295	4.942	-0.420	2499.946	0.040	4.942	4.960	355.142
2600.000	0.917	342.456	6.529	-0.389	2599.933	0.593	6.529	6.541	356.590
2700.000	0.919	31.008	7.980	-0.217	2699.922	0.755	7.980	7.983	358.443
2800.000	0.740	340.728	9.277	-0.017	2799.912	0.723	9.277	9.277	359.897
2900.000	0.904	36.150	10.523	0.235	2899.904	0.778	10.523	10.526	1.281
3000.000	0.791	8.127	11.843	0.798	2999.893	0.425	11.843	11.869	3.855
3100.000	0.744	52.584	12.920	1.411	3099.885	0.582	12.920	12.997	6.234
3200.000	0.772	45.039	13.791	2.404	3199.876	0.103	13.791	13.998	9.887
3300.000	0.537	52.293	14.553	3.251	3299.870	0.248	14.553	14.912	12.592
3400.000	0.201	351.624	15.013	3.596	3399.868	0.472	15.013	15.438	13.469
3500.000	0.661	282.299	15.310	3.006	3499.865	0.619	15.310	15.603	11.110

3600.000	1.120	274.954	15.518	1.469	3599.853	0.472	15.518	15.587	5.408
3700.000	1.782	282.709	15.944	-1.021	3699.820	0.689	15.944	15.977	356.335
3800.000	2.073	263.147	16.070	-4.334	3799.765	0.715	16.070	16.644	344.907
3900.000	2.198	279.553	16.173	-8.021	3899.696	0.622	16.173	18.052	333.621
4000.000	2.204	289.037	17.118	-11.729	3999.623	0.364	17.118	20.751	325.581
4100.000	2.762	297.031	18.840	-15.694	4099.529	0.655	18.840	24.520	320.207
4200.000	2.918	307.307	21.478	-19.864	4199.406	0.531	21.478	29.256	317.235
4300.000	2.854	313.667	24.740	-23.690	4299.280	0.326	24.740	34.253	316.242
4400.000	2.824	301.806	27.757	-27.584	4399.158	0.587	27.757	39.132	315.179
4500.000	3.474	304.167	30.757	-32.184	4499.007	0.664	30.757	44.518	313.701
4600.000	3.531	310.826	34.472	-37.022	4598.820	0.410	34.472	50.586	312.957
4700.000	3.298	310.261	38.344	-41.547	4698.643	0.235	38.344	56.536	312.704
4800.000	3.706	303.806	42.001	-46.427	4798.456	0.567	42.001	62.606	312.135
4900.000	4.049	296.968	45.400	-52.258	4898.228	0.575	45.400	69.225	310.983
5000.000	3.427	294.989	48.263	-58.114	4998.014	0.635	48.263	75.542	309.709
5100.000	2.801	307.370	51.010	-62.766	5097.867	0.915	51.010	80.880	309.101
5200.000	1.600	344.129	53.836	-65.090	5197.796	1.796	53.836	84.469	309.594
5300.000	1.267	357.496	56.284	-65.520	5297.765	0.470	56.284	86.375	310.664
5400.000	0.930	70.849	57.655	-64.801	5397.751	1.340	57.655	86.737	311.660
5500.000	1.035	92.395	57.883	-63.132	5497.736	0.382	57.883	85.651	312.517
5600.000	1.217	113.199	57.427	-61.253	5597.718	0.444	57.427	83.963	313.154
5700.000	1.947	114.459	56.305	-58.730	5697.679	0.731	56.305	81.360	313.793
5800.000	1.403	68.564	56.049	-56.043	5797.640	1.399	56.049	79.261	315.003
5900.000	1.744	89.342	56.514	-53.382	5897.603	0.659	56.514	77.740	316.633
6000.000	1.944	126.852	55.514	-50.503	5997.554	1.201	55.514	75.049	317.706
6100.000	2.229	145.414	52.896	-48.042	6097.489	0.729	52.896	71.456	317.753
6200.000	2.398	140.549	49.679	-45.608	6197.408	0.259	49.679	67.440	317.446
6300.000	2.925	136.277	46.220	-42.515	6297.300	0.563	46.220	62.800	317.390
6400.000	3.019	147.851	42.146	-39.351	6397.166	0.606	42.146	57.661	316.965
6500.000	2.623	134.473	38.313	-36.316	6497.046	0.765	38.313	52.790	316.533
6600.000	1.859	123.643	35.812	-33.333	6596.969	0.871	35.812	48.924	317.053
6700.000	1.366	104.297	34.619	-30.828	6696.930	0.728	34.619	46.355	318.315
6800.000	1.118	103.068	34.104	-28.722	6796.906	0.249	34.104	44.587	319.896
6900.000	0.964	73.837	34.117	-26.963	6896.890	0.546	34.117	43.486	321.680
7000.000	0.781	108.235	34.138	-25.508	6996.879	0.545	34.138	42.616	323.233

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