

Company: Anadarko Petroleum Corp.

Well: Nick Sekich Unit B 1

API: 05-123-08240

Rig Name: Production/Warrior

Location: Weld County, Colorado

Latitude: 40.215, Longitude: -104.929

Directions are relative to True North

VS-Azi: 0.000 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB = Ground Level

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: hgyro-de_01.ut

Minimum Curvature Method

Report Date/Time: 3/26/2014 / 14:49

Vaughn Energy Services

Henderson, CO.

Justin Williams

303-853-4976

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	0.709	274.369	99.997	0.047	-0.617	0.047	0.619	274.369	0.709
200.000	0.655	283.082	199.990	0.224	-1.791	0.224	1.805	277.119	0.117
300.000	0.248	303.873	299.987	0.474	-2.527	0.474	2.571	280.618	0.432
400.000	0.323	282.293	399.986	0.655	-2.983	0.655	3.054	282.378	0.130
500.000	0.490	224.087	499.984	0.408	-3.556	0.408	3.579	276.543	0.421
600.000	0.287	226.382	599.981	-0.072	-4.035	-0.072	4.035	268.976	0.203
700.000	0.346	193.117	699.980	-0.540	-4.285	-0.540	4.319	262.822	0.190
800.000	0.360	268.898	799.979	-0.840	-4.668	-0.840	4.743	259.797	0.434
900.000	0.358	251.980	899.977	-0.943	-5.280	-0.943	5.363	259.874	0.106
1000.000	0.261	253.038	999.975	-1.106	-5.794	-1.106	5.899	259.194	0.098
1100.000	0.588	271.651	1099.972	-1.157	-6.524	-1.157	6.626	259.940	0.351
1200.000	1.310	275.395	1199.958	-1.035	-8.175	-1.035	8.240	262.783	0.725
1300.000	1.164	255.979	1299.935	-1.174	-10.299	-1.174	10.366	263.498	0.441
1400.000	0.890	276.194	1399.919	-1.336	-12.057	-1.336	12.131	263.677	0.450
1500.000	1.669	294.794	1499.894	-0.641	-14.152	-0.641	14.167	267.405	0.873
1600.000	1.626	294.112	1599.852	0.549	-16.770	0.549	16.779	271.875	0.048
1700.000	1.061	322.567	1699.826	1.864	-18.627	1.864	18.720	275.714	0.858
1800.000	1.301	295.685	1799.805	3.091	-20.213	3.091	20.448	278.694	0.596
1900.000	0.516	276.887	1899.792	3.637	-21.683	3.637	21.986	279.521	0.829
2000.000	0.754	344.760	1999.787	4.326	-22.304	4.326	22.719	280.976	0.736
2100.000	0.526	340.573	2099.781	5.394	-22.629	5.394	23.263	283.407	0.232
2200.000	0.594	17.270	2199.776	6.322	-22.628	6.322	23.495	285.610	0.359
2300.000	0.754	358.263	2299.769	7.475	-22.494	7.475	23.704	288.381	0.273
2400.000	0.499	356.897	2399.763	8.567	-22.538	8.567	24.111	290.813	0.255
2500.000	0.590	340.985	2499.759	9.489	-22.729	9.489	24.630	292.660	0.175
2600.000	0.296	19.016	2599.756	10.220	-22.813	10.220	24.997	294.132	0.401
2700.000	0.886	316.128	2699.751	11.022	-23.264	11.022	25.743	295.350	0.796
2800.000	0.462	234.862	2799.745	11.347	-24.130	11.347	26.665	295.185	0.935
2900.000	0.827	302.904	2899.740	11.507	-25.065	11.507	27.580	294.658	0.782
3000.000	0.461	235.722	2999.735	11.672	-26.004	11.672	28.503	294.173	0.775
3100.000	0.370	308.349	3099.733	11.645	-26.589	11.645	29.028	293.652	0.498
3200.000	0.461	236.821	3199.731	11.626	-27.179	11.626	29.561	293.158	0.491
3300.000	0.291	73.655	3299.730	11.477	-27.273	11.477	29.589	292.822	0.744
3400.000	0.236	102.549	3399.729	11.503	-26.828	11.503	29.190	293.209	0.142

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	0.355	291.745	3499.728	11.573	-26.914	11.573	29.297	293.268	0.590
3600.000	0.869	211.346	3599.724	11.040	-27.597	11.040	29.723	291.804	0.882
3700.000	0.997	261.614	3699.712	10.266	-28.852	10.266	30.624	289.586	0.801
3800.000	0.925	263.101	3799.698	10.042	-30.514	10.042	32.124	288.216	0.076
3900.000	0.466	181.610	3899.692	9.538	-31.327	9.538	32.747	286.934	0.972
4000.000	0.186	84.892	3999.691	9.146	-31.177	9.146	32.491	286.350	0.522
4100.000	0.209	141.949	4099.690	9.017	-30.903	9.017	32.191	286.267	0.190
4200.000	0.512	220.217	4199.689	8.532	-31.079	8.532	32.229	285.352	0.512
4300.000	0.337	7.703	4299.688	8.483	-31.328	8.483	32.456	285.151	0.817
4400.000	0.339	37.733	4399.686	9.008	-31.108	9.008	32.386	286.149	0.175
4500.000	0.534	285.877	4499.684	9.369	-31.376	9.369	32.745	286.626	0.731
4600.000	0.580	221.248	4599.680	9.116	-32.158	9.116	33.425	285.827	0.597
4700.000	0.572	291.348	4699.676	8.917	-32.957	8.917	34.142	285.141	0.662
4800.000	0.522	203.146	4799.673	8.680	-33.601	8.680	34.704	284.485	0.763
4900.000	0.588	232.205	4899.669	7.947	-34.186	7.947	35.098	283.086	0.286
5000.000	0.272	358.251	4999.667	7.870	-34.599	7.870	35.483	282.814	0.780
5100.000	0.439	306.097	5099.665	8.333	-34.916	8.333	35.896	283.423	0.346
5200.000	0.749	276.794	5199.660	8.635	-35.874	8.635	36.898	283.535	0.424
5300.000	0.857	308.698	5299.651	9.180	-37.106	9.180	38.225	283.896	0.453
5400.000	0.483	240.996	5399.645	9.444	-38.059	9.444	39.213	283.935	0.809
5500.000	0.195	247.410	5499.643	9.174	-38.585	9.174	39.660	283.374	0.290
5600.000	0.883	162.430	5599.639	8.373	-38.510	8.373	39.409	282.267	0.888
5700.000	0.450	198.861	5699.632	7.267	-38.404	7.267	39.085	280.715	0.586
5800.000	1.067	243.108	5799.624	6.474	-39.361	6.474	39.890	279.340	0.808
5900.000	1.296	291.338	5899.605	6.464	-41.245	6.464	41.748	278.908	0.988
6000.000	1.774	322.052	5999.570	8.096	-43.250	8.096	44.001	280.603	0.934
6100.000	2.671	330.558	6099.494	11.346	-45.347	11.346	46.744	284.047	0.953
6200.000	3.292	345.123	6199.360	16.150	-47.229	16.150	49.914	288.878	0.975
6300.000	4.616	10.124	6299.127	22.887	-47.259	22.887	52.509	295.840	2.144
6400.000	3.239	20.621	6398.891	29.492	-45.557	29.492	54.270	302.918	1.548
6500.000	1.937	26.409	6498.787	33.650	-43.810	33.650	55.242	307.527	1.326
6600.000	1.242	53.116	6598.749	35.814	-42.192	35.814	55.342	310.326	0.998
6700.000	1.165	96.369	6698.729	36.352	-40.315	36.352	54.284	312.041	0.890
6800.000	1.209	144.182	6798.710	35.383	-38.687	35.383	52.428	312.446	0.963
6900.000	0.989	153.661	6898.692	33.754	-37.687	33.754	50.593	311.849	0.284
7000.000	0.637	163.962	6998.682	32.446	-37.150	32.446	49.324	311.133	0.380
7100.000	0.897	182.606	7098.673	31.130	-37.032	31.130	48.378	310.051	0.357
7200.000	0.657	188.137	7198.663	29.781	-37.149	29.781	47.612	308.718	0.251
7300.000	0.907	195.293	7298.654	28.449	-37.439	28.449	47.022	307.231	0.268
7365.000	0.378	215.133	7363.650	27.778	-37.698	27.778	46.827	306.384	0.871
<div> <div>HORIZONTAL DISPLACEMENT IS</div> <div>46.827 FEET AT 306.384 DEGREES</div> </div>									