

Company: Anadarko Petroleum

Well/API: UPRC Federal 05-06k/05-123-16823

Tool Type: North Seeking Rate Gyro

Rig Name: Production/VES

County/State: Weld/Colorado

Latitude: 40.25437, Longitude: -104.80145

Directions are relative to True North

VS-Azi: 0.000 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB=GL Elevation=4779'

DRILLOG GYRO SURVEY CALCULATIONS

Filename: survey\_int.ut

Minimum Curvature Method

Report Date/Time: 3/10/2015 / 13:41

Lat/Long Obtained By Handheld GPS At Wellhead

Handheld GPS Reference:NAD83/Device Error:±9 Feet

VES Survey International - Henderson CO

Dustin Skoruppa

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	0.285	191.881	100.000	-0.244	-0.051	-0.244	0.249	191.881	0.285
200.000	0.372	189.548	199.998	-0.808	-0.156	-0.808	0.823	190.961	0.088
300.000	0.459	187.215	299.995	-1.525	-0.261	-1.525	1.547	189.696	0.088
400.000	0.332	185.541	399.993	-2.211	-0.339	-2.211	2.237	188.714	0.127
500.000	0.205	183.866	499.992	-2.678	-0.379	-2.678	2.705	188.053	0.127
600.000	0.512	214.194	599.990	-3.226	-0.642	-3.226	3.290	191.253	0.350
700.000	0.818	244.522	699.983	-3.903	-1.537	-3.903	4.195	201.497	0.456
800.000	0.595	251.221	799.976	-4.377	-2.673	-4.377	5.128	211.410	0.238
900.000	0.371	257.921	899.972	-4.612	-3.481	-4.612	5.778	217.044	0.230
1000.000	0.308	258.962	999.970	-4.731	-4.061	-4.731	6.235	220.645	0.063
1100.000	0.245	260.004	1099.969	-4.819	-4.536	-4.819	6.618	223.262	0.063
1200.000	0.342	240.457	1199.968	-5.004	-5.006	-5.004	7.078	225.011	0.138
1300.000	0.439	220.910	1299.965	-5.440	-5.516	-5.440	7.747	225.396	0.163
1400.000	0.926	234.744	1399.958	-6.196	-6.427	-6.196	8.928	226.047	0.511
1500.000	1.414	248.579	1499.937	-7.114	-8.236	-7.114	10.883	229.181	0.560
1600.000	1.102	257.424	1599.913	-7.773	-10.322	-7.773	12.922	233.018	0.367
1700.000	1.233	243.134	1699.892	-8.469	-12.220	-8.469	14.868	235.277	0.318
1800.000	0.862	276.972	1799.876	-8.864	-13.927	-8.864	16.508	237.525	0.705
1900.000	0.922	303.380	1899.865	-8.330	-15.346	-8.330	17.460	241.507	0.412
2000.000	0.968	303.650	1999.851	-7.419	-16.721	-7.419	18.293	246.075	0.046
2100.000	1.023	305.739	2099.836	-6.429	-18.148	-6.429	19.254	250.493	0.066
2200.000	1.392	337.323	2199.815	-4.787	-19.341	-4.787	19.925	256.097	0.747
2300.000	1.315	309.787	2299.788	-2.932	-20.691	-2.932	20.898	261.934	0.648
2400.000	1.420	339.306	2399.761	-1.039	-22.011	-1.039	22.036	267.298	0.704
2500.000	0.964	8.665	2499.740	0.953	-22.322	0.953	22.343	272.444	0.748
2600.000	1.196	9.097	2599.722	2.815	-22.030	2.815	22.210	277.282	0.232
2700.000	1.327	9.880	2699.698	4.987	-21.667	4.987	22.233	282.961	0.132
2800.000	1.377	16.670	2799.670	7.278	-21.123	7.278	22.342	289.012	0.168
2900.000	1.344	18.864	2899.642	9.539	-20.399	9.539	22.520	295.062	0.062
3000.000	0.927	41.727	2999.622	11.253	-19.482	11.253	22.498	300.012	0.608
3100.000	0.607	10.613	3099.613	12.378	-18.845	12.378	22.547	303.298	0.514
3200.000	0.991	22.360	3199.604	13.699	-18.419	13.699	22.954	306.639	0.415
3300.000	0.756	306.960	3299.595	14.895	-18.617	14.895	23.842	308.661	1.084
3400.000	0.497	243.249	3399.590	15.096	-19.532	15.096	24.686	307.701	0.697

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	1.017	223.649	3499.581	14.259	-20.532	14.259	24.997	304.779	0.574
3600.000	0.805	233.818	3599.568	13.202	-21.711	13.202	25.410	301.302	0.267
3700.000	0.876	242.549	3699.558	12.435	-22.956	12.435	26.108	298.444	0.146
3800.000	0.938	235.248	3799.545	11.616	-24.307	11.616	26.940	295.542	0.131
3900.000	1.135	231.580	3899.529	10.534	-25.756	10.534	27.826	292.244	0.207
4000.000	1.583	212.433	3999.501	8.753	-27.272	8.753	28.642	287.794	0.632
4100.000	2.022	203.488	4099.451	5.969	-28.716	5.969	29.330	281.743	0.520
4200.000	2.161	195.641	4199.385	2.536	-29.927	2.536	30.034	274.844	0.318
4300.000	1.173	201.985	4299.341	-0.229	-30.819	-0.229	30.819	269.575	1.004
4400.000	0.500	197.171	4399.330	-1.595	-31.331	-1.595	31.371	267.086	0.675
4500.000	1.015	219.173	4499.321	-2.698	-32.019	-2.698	32.132	265.183	0.582
4600.000	0.985	261.450	4599.307	-3.512	-33.428	-3.512	33.612	264.002	0.722
4700.000	1.114	265.069	4699.291	-3.724	-35.246	-3.724	35.442	263.969	0.145
4800.000	1.476	245.677	4799.265	-4.338	-37.387	-4.338	37.638	263.382	0.563
4900.000	1.443	232.970	4899.233	-5.626	-39.566	-5.626	39.964	261.907	0.325
5000.000	1.194	242.532	4999.207	-6.865	-41.495	-6.865	42.059	260.606	0.331
5100.000	0.920	258.398	5099.190	-7.507	-43.206	-7.507	43.853	260.143	0.399
5200.000	0.858	269.148	5199.178	-7.680	-44.741	-7.680	45.395	260.260	0.178
5300.000	0.797	284.106	5299.168	-7.521	-46.165	-7.521	46.773	260.747	0.224
5400.000	1.304	261.839	5399.151	-7.513	-47.966	-7.513	48.551	261.098	0.642
5500.000	1.674	281.933	5499.118	-7.373	-50.522	-7.373	51.057	261.697	0.634
5600.000	2.810	271.836	5599.040	-6.992	-54.401	-6.992	54.849	262.676	1.199
5700.000	3.115	281.824	5698.907	-6.357	-59.510	-6.357	59.849	263.903	0.598
5800.000	4.798	300.265	5798.669	-3.692	-65.782	-3.692	65.886	266.787	2.089
5900.000	11.255	334.485	5897.683	7.239	-73.609	7.239	73.964	275.616	7.765
6000.000	16.341	334.579	5994.766	28.765	-83.858	28.765	88.655	288.933	5.086
6100.000	21.970	336.747	6089.192	58.682	-97.293	58.682	113.620	301.096	5.673
6200.000	26.472	334.002	6180.368	95.922	-114.458	95.922	149.337	309.965	4.640
6300.000	31.726	334.502	6267.716	139.717	-135.561	139.717	194.673	315.865	5.259
6400.000	35.601	332.046	6350.935	189.181	-160.534	189.181	248.114	319.683	4.107
6500.000	36.864	326.230	6431.620	239.843	-190.862	239.843	306.518	321.488	3.661
6600.000	39.059	319.519	6510.492	288.769	-228.010	288.769	367.935	321.706	4.672
6700.000	38.482	316.983	6588.463	335.485	-269.692	335.485	430.446	321.205	1.690
6800.000	38.357	314.136	6666.818	379.844	-313.190	379.844	492.310	320.494	1.774
6900.000	38.845	313.756	6744.969	423.140	-358.110	423.140	554.337	319.758	0.543
7000.000	39.354	317.573	6822.585	468.239	-402.158	468.239	617.235	319.342	2.460
7100.000	39.273	311.546	6899.982	512.650	-447.254	512.650	680.328	318.897	3.818
7200.000	39.567	310.028	6977.235	554.127	-495.331	554.127	743.242	318.207	1.007
7300.000	37.943	302.060	7055.265	590.956	-545.809	590.956	804.448	317.274	5.243
7400.000	37.576	301.499	7134.324	623.206	-597.863	623.206	863.612	316.189	0.503
7500.000	36.746	301.161	7214.017	654.616	-649.459	654.616	922.127	315.227	0.855
HORIZONTAL DISPLACEMENT IS 922.127 FEET AT 315.227 DEGREES									