

Company: Anadarko Petroleum Corp.  
 Well/API: Elton Red V 12-1/05-123-17631  
 Tool Type: North Seeking Rate Gyro  
 Rig Name: Production/ VES  
 County/State: Weld/Colorado  
 Latitude: 40.158, Longitude: -104.831  
 Directions are relative to True North  
 VS-Azi: 0.000 Degrees



**FIELD COPY ONLY (NOT DEFINITIVE)**

Depth Reference : RKB= GL Elevation= 4832 Feet

**DRILLOG GYRO SURVEY CALCULATIONS**

Filename: post-de\_01.ut

Minimum Curvature Method

Report Date/Time: 11/13/2014 / 18:54

Lat/Long & Elevation Obtained by Handheld GPS at Wellhead

Handheld GPS Reference: NAD83/ Device Error: +- 9 Feet

VES Survey International- Henderson Co

Sean Bratt  
 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	0.400	152.085	99.999	-0.308	0.163	-0.308	0.349	152.085	0.400
200.000	0.584	265.067	199.997	-0.660	-0.181	-0.660	0.684	195.353	0.826
300.000	0.302	127.860	299.996	-0.865	-0.481	-0.865	0.990	209.065	0.831
400.000	0.536	272.099	399.994	-1.010	-0.741	-1.010	1.252	216.261	0.801
500.000	0.397	156.393	499.993	-1.310	-1.070	-1.310	1.691	219.227	0.794
600.000	0.346	154.823	599.990	-1.901	-0.802	-1.901	2.064	202.880	0.052
700.000	0.471	222.075	699.988	-2.480	-0.949	-2.480	2.655	200.944	0.464
800.000	0.360	309.667	799.987	-2.584	-1.466	-2.584	2.971	209.574	0.581
900.000	0.324	160.899	899.986	-2.651	-1.616	-2.651	3.104	211.363	0.659
1000.000	0.690	263.499	999.983	-2.986	-2.121	-2.986	3.663	215.387	0.824
1100.000	0.794	235.666	1099.975	-3.446	-3.292	-3.446	4.766	223.695	0.371
1200.000	0.279	291.412	1199.971	-3.748	-4.091	-3.748	5.548	227.510	0.678
1300.000	0.902	228.661	1299.966	-4.179	-4.909	-4.179	6.447	229.596	0.813
1400.000	0.650	259.516	1399.957	-4.801	-6.057	-4.801	7.730	231.598	0.479
1500.000	0.794	228.354	1499.949	-5.365	-7.133	-5.365	8.925	233.051	0.412
1600.000	0.856	248.220	1599.939	-6.103	-8.344	-6.103	10.338	233.820	0.291
1700.000	0.855	237.965	1699.928	-6.776	-9.671	-6.776	11.808	234.983	0.153
1800.000	0.669	268.617	1799.920	-7.186	-10.887	-7.186	13.045	236.575	0.441
1900.000	0.783	231.265	1899.912	-7.627	-12.004	-7.627	14.222	237.569	0.477
2000.000	0.787	254.946	1999.903	-8.233	-13.200	-8.233	15.557	238.048	0.322
2100.000	0.832	277.931	2099.893	-8.311	-14.583	-8.311	16.785	240.320	0.326
2200.000	1.110	274.653	2199.879	-8.132	-16.267	-8.132	18.187	243.438	0.283
2300.000	1.805	262.933	2299.846	-8.248	-18.795	-8.248	20.525	246.307	0.753
2400.000	1.817	269.645	2399.796	-8.451	-21.943	-8.451	23.514	248.936	0.212
2500.000	1.704	279.479	2499.749	-8.216	-24.995	-8.216	26.311	251.804	0.322
2600.000	1.229	275.636	2599.716	-7.866	-27.529	-7.866	28.631	254.053	0.485
2700.000	1.538	263.428	2699.687	-7.914	-29.929	-7.914	30.958	255.188	0.425
2800.000	1.373	292.888	2799.656	-7.602	-32.366	-7.602	33.247	256.783	0.757
2900.000	0.953	283.062	2899.635	-6.948	-34.281	-6.948	34.977	258.543	0.463
3000.000	1.016	296.738	2999.621	-6.361	-35.882	-6.361	36.442	259.948	0.242
3100.000	1.223	302.206	3099.602	-5.393	-37.577	-5.393	37.962	261.832	0.233
3200.000	1.742	300.897	3199.568	-4.044	-39.784	-4.044	39.989	264.195	0.520
3300.000	1.712	302.109	3299.523	-2.470	-42.353	-2.470	42.425	266.662	0.047
3400.000	1.197	294.344	3399.490	-1.246	-44.570	-1.246	44.587	268.399	0.551

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	0.313	292.490	3499.480	-0.711	-45.774	-0.711	45.779	269.111	0.884
3600.000	0.281	316.321	3599.479	-0.428	-46.196	-0.428	46.198	269.469	0.127
3700.000	0.405	30.144	3699.478	0.054	-46.188	0.054	46.188	270.067	0.424
3800.000	0.430	101.942	3799.476	0.282	-45.643	0.282	45.644	270.354	0.490
3900.000	0.163	42.688	3899.474	0.309	-45.180	0.309	45.181	270.392	0.374
4000.000	0.355	127.833	3999.474	0.223	-44.839	0.223	44.839	270.285	0.378
4100.000	0.387	121.101	4099.472	-0.142	-44.305	-0.142	44.305	269.817	0.054
4200.000	0.554	192.397	4199.469	-0.788	-44.120	-0.788	44.127	268.976	0.565
4300.000	0.658	308.212	4299.466	-0.905	-44.675	-0.905	44.684	268.839	1.029
4400.000	0.283	1.053	4399.463	-0.303	-45.122	-0.303	45.123	269.615	0.537
4500.000	0.682	336.865	4499.459	0.491	-45.351	0.491	45.354	270.621	0.439
4600.000	0.347	301.622	4599.455	1.197	-45.843	1.197	45.858	271.496	0.446
4650.000	0.446	260.690	4649.454	1.245	-46.163	1.245	46.180	271.544	0.585

HORIZONTAL DISPLACEMENT IS  
46.180 FEET AT 271.544 DEGREES