



Company: PDC Energy
Well: Asbury V #3-14
API: 05-123-16899
Rig Name: Production / VESSI
State/County: Colorado/Weld
Latitude: 40.162, Longitude: -104.878
Directions are relative to True North
VS-Azi: 0.000 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : Gournrd Level

DRILLOG GYRO SURVEY CALCULATIONS

Filename: post-de_01.ut
Minimum Curvature Method
Report Date/Time: 10/25/2014 / 18:30

VES Survey International
Henderson, Colorado
303-853-4976
Kevin McDowell

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	0.383	240.697	99.999	-0.164	-0.292	-0.164	0.334	240.697	0.383
200.000	0.275	259.300	199.998	-0.372	-0.819	-0.372	0.899	245.573	0.151
300.000	0.343	249.580	299.996	-0.521	-1.334	-0.521	1.432	248.685	0.086
400.000	0.233	139.125	399.995	-0.779	-1.481	-0.779	1.674	242.261	0.477
500.000	0.319	103.762	499.994	-0.999	-1.078	-0.999	1.470	227.169	0.186
600.000	0.327	51.882	599.993	-0.889	-0.583	-0.889	1.063	213.257	0.283
700.000	0.294	60.388	699.991	-0.586	-0.136	-0.586	0.602	193.033	0.057
800.000	0.067	113.452	799.991	-0.483	0.141	-0.483	0.503	163.766	0.259
900.000	0.263	195.803	899.991	-0.727	0.132	-0.727	0.739	169.725	0.262
1000.000	0.577	157.060	999.988	-1.411	0.266	-1.411	1.436	169.342	0.407
1100.000	0.535	180.900	1099.983	-2.342	0.454	-2.342	2.385	169.017	0.233
1200.000	0.454	208.014	1199.980	-3.158	0.261	-3.158	3.169	175.273	0.245
1300.000	0.568	221.515	1299.976	-3.878	-0.253	-3.878	3.887	183.734	0.165
1400.000	0.376	220.344	1399.972	-4.500	-0.794	-4.500	4.569	190.007	0.192
1500.000	0.428	218.747	1499.970	-5.041	-1.240	-5.041	5.191	193.821	0.053
1600.000	0.738	242.569	1599.965	-5.629	-2.045	-5.629	5.989	199.969	0.387
1700.000	0.463	249.576	1699.959	-6.066	-2.995	-6.066	6.765	206.276	0.284
1800.000	0.347	301.864	1799.957	-6.047	-3.630	-6.047	7.053	210.978	0.371
1900.000	0.604	281.123	1899.954	-5.786	-4.404	-5.786	7.272	217.280	0.305
2000.000	0.577	293.234	1999.948	-5.485	-5.384	-5.485	7.686	224.467	0.127
2100.000	0.434	305.013	2099.944	-5.069	-6.158	-5.069	7.976	230.539	0.176
2200.000	0.559	334.611	2199.941	-4.411	-6.678	-4.411	8.003	236.555	0.281
2300.000	0.966	41.278	2299.933	-3.336	-6.331	-3.336	7.156	242.213	0.905
2400.000	0.378	13.675	2399.926	-2.381	-5.696	-2.381	6.174	247.312	0.655
2500.000	0.544	45.593	2499.923	-1.728	-5.279	-1.728	5.554	251.873	0.300
2600.000	0.444	266.441	2599.922	-1.420	-5.326	-1.420	5.512	255.075	0.927
2700.000	1.004	193.544	2699.915	-2.296	-5.918	-2.296	6.348	248.800	0.971
2800.000	0.844	304.204	2799.908	-2.733	-6.732	-2.733	7.266	247.902	1.522
2900.000	0.667	249.420	2899.900	-2.524	-7.886	-2.524	8.280	252.251	0.713
3000.000	0.550	332.633	2999.896	-2.302	-8.652	-2.302	8.953	255.098	0.813
3100.000	0.810	296.043	3099.889	-1.566	-9.508	-1.566	9.636	260.649	0.493
3200.000	0.762	300.246	3199.880	-0.920	-10.717	-0.920	10.757	265.092	0.075
3300.000	0.460	314.580	3299.874	-0.303	-11.578	-0.303	11.582	268.500	0.336
3400.000	0.737	286.972	3399.869	0.166	-12.480	0.166	12.481	270.764	0.392
3500.000	0.387	300.589	3499.864	0.526	-13.386	0.526	13.396	272.251	0.372

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
3600.000	0.844	249.645	3599.858	0.442	-14.367	0.442	14.374	271.762	0.671
3700.000	0.872	271.780	3699.847	0.209	-15.818	0.209	15.819	270.759	0.331
3800.000	0.940	248.102	3799.835	-0.073	-17.340	-0.073	17.340	269.759	0.378
3900.000	0.960	259.235	3899.822	-0.535	-18.924	-0.535	18.932	268.380	0.185
4000.000	1.039	278.451	3999.807	-0.559	-20.644	-0.559	20.651	268.450	0.343
4100.000	0.994	283.773	4099.791	-0.219	-22.383	-0.219	22.384	269.440	0.104
4200.000	0.710	284.711	4199.780	0.145	-23.825	0.145	23.826	270.349	0.285
4300.000	0.980	296.764	4299.769	0.688	-25.188	0.688	25.197	271.564	0.322
4400.000	0.881	308.063	4399.756	1.547	-26.557	1.547	26.602	273.333	0.208
4500.000	0.868	303.489	4499.744	2.438	-27.794	2.438	27.901	275.014	0.071
4600.000	0.863	325.201	4599.733	3.474	-28.855	3.474	29.063	276.866	0.326
4700.000	0.991	284.852	4699.721	4.314	-30.120	4.314	30.428	278.151	0.650
4800.000	0.906	281.542	4799.707	4.694	-31.730	4.694	32.075	278.415	0.101
4900.000	0.994	250.040	4899.694	4.556	-33.320	4.556	33.630	277.786	0.523
5000.000	0.666	283.191	4999.684	4.392	-34.701	4.392	34.978	277.214	0.569
5100.000	0.874	311.517	5099.675	5.030	-35.838	5.030	36.190	277.990	0.428
5200.000	0.709	313.376	5199.666	5.961	-36.859	5.961	37.338	279.187	0.167
5300.000	0.891	267.231	5299.657	6.348	-38.086	6.348	38.611	279.463	0.649
5400.000	0.779	304.086	5399.647	6.692	-39.425	6.692	39.989	279.633	0.538
5500.000	0.617	278.305	5499.640	7.150	-40.521	7.150	41.147	280.007	0.349
5600.000	0.876	270.037	5599.631	7.229	-41.819	7.229	42.439	279.807	0.279
5700.000	1.058	274.181	5699.617	7.297	-43.504	7.297	44.112	279.521	0.196
5800.000	0.682	314.776	5799.606	7.783	-44.848	7.783	45.518	279.846	0.699
5900.000	0.796	266.991	5899.599	8.166	-45.964	8.166	46.684	280.074	0.608
6000.000	0.594	252.319	5999.591	7.972	-47.151	7.972	47.820	279.597	0.268
6100.000	0.375	259.053	6099.588	7.753	-47.966	7.753	48.588	279.182	0.226
6200.000	0.101	71.672	6199.587	7.719	-48.203	7.719	48.817	279.097	0.475
6300.000	0.246	65.119	6299.587	7.837	-47.925	7.837	48.561	279.287	0.146
6400.000	0.900	125.277	6399.582	7.473	-47.089	7.473	47.679	279.018	0.806
6500.000	0.444	77.651	6499.575	7.103	-46.069	7.103	46.614	278.765	0.684
6600.000	0.642	60.143	6599.571	7.465	-45.204	7.465	45.817	279.377	0.256
6700.000	0.339	5.594	6699.568	8.038	-44.690	8.038	45.407	280.197	0.524
6800.000	0.291	51.720	6799.566	8.490	-44.461	8.490	45.265	280.811	0.251
6900.000	0.293	52.959	6899.565	8.801	-44.058	8.801	44.929	281.297	0.007
7000.000	0.117	34.119	6999.564	9.040	-43.797	9.040	44.720	281.662	0.186
7100.000	0.383	14.476	7099.563	9.448	-43.656	9.448	44.667	282.211	0.276
7200.000	0.211	117.908	7199.562	9.686	-43.410	9.686	44.477	282.578	0.479
7300.000	0.219	142.295	7299.562	9.448	-43.130	9.448	44.152	282.356	0.091
7400.000	0.609	57.839	7399.559	9.580	-42.563	9.580	43.627	282.684	0.627

HORIZONTAL DISPLACEMENT IS
43.627 FEET AT 282.684 DEGREES