



Company: PDC Energy
 Well: White 27-5
 API: 05-123-16108
 Rig Name: Production / V.E.S.
 State/County: Colorado / Weld County
 Latitude: 40.376, Longitude: -104.538
 Directions are relative to True North
 VS-Azi: 0.000 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB = Ground Level

DRILLOG GYRO SURVEY CALCULATIONS

Filename: survey.ut
 Minimum Curvature Method
 Report Date/Time: 9/19/2014 / 13:29

Vaughn Energy Services
 Henderson Colorado
 303-853-4976
 Norman Cowan

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	0.612	315.040	99.998	0.378	-0.377	0.378	0.534	315.040	0.612
200.000	0.453	311.290	199.994	1.017	-1.052	1.017	1.463	314.028	0.163
300.000	0.831	343.820	299.988	1.974	-1.551	1.974	2.510	321.840	0.510
400.000	0.439	13.370	399.982	3.043	-1.665	3.043	3.468	331.319	0.498
500.000	0.704	345.517	499.977	4.010	-1.730	4.010	4.367	336.669	0.377
600.000	0.763	343.323	599.968	5.243	-2.074	5.243	5.638	338.414	0.066
700.000	0.640	351.939	699.961	6.434	-2.344	6.434	6.848	339.984	0.162
800.000	0.407	276.732	799.958	7.028	-2.775	7.028	7.556	338.457	0.665
900.000	0.414	331.920	899.955	7.389	-3.297	7.389	8.091	335.952	0.380
1000.000	0.126	11.870	999.954	7.815	-3.445	7.815	8.540	336.212	0.328
1100.000	0.309	28.951	1099.954	8.158	-3.292	8.158	8.797	338.024	0.192
1200.000	0.749	353.097	1199.949	9.042	-3.240	9.042	9.605	340.285	0.530
1300.000	0.839	343.664	1299.940	10.393	-3.524	10.393	10.974	341.267	0.159
1400.000	0.870	27.497	1399.930	11.768	-3.380	11.768	12.244	343.975	0.638
1500.000	0.859	73.080	1499.919	12.660	-2.312	12.660	12.869	349.650	0.670
1600.000	0.597	43.045	1599.912	13.259	-1.239	13.259	13.317	354.662	0.455
1700.000	0.501	135.570	1699.909	13.327	-0.577	13.327	13.340	357.520	0.796
1800.000	0.825	101.394	1799.902	12.873	0.434	12.873	12.880	1.933	0.497
1900.000	0.455	20.096	1899.897	13.104	1.277	13.104	13.166	5.564	0.880
2000.000	0.436	346.397	1999.894	13.847	1.324	13.847	13.910	5.460	0.259
2100.000	0.115	7.466	2099.893	14.316	1.247	14.316	14.370	4.979	0.331
2200.000	0.467	342.808	2199.892	14.805	1.140	14.805	14.848	4.402	0.366
2300.000	0.700	25.643	2299.887	15.745	1.283	15.745	15.797	4.660	0.478
2400.000	0.754	76.838	2399.880	16.445	2.188	16.445	16.590	7.580	0.630
2500.000	0.628	9.773	2499.874	17.134	2.922	17.134	17.382	9.678	0.771
2600.000	1.047	13.323	2599.863	18.564	3.226	18.564	18.842	9.857	0.423
2700.000	0.748	63.166	2699.852	19.748	4.019	19.748	20.153	11.503	0.804
2800.000	0.653	71.415	2799.845	20.224	5.142	20.224	20.867	14.264	0.139
2900.000	1.144	123.688	2899.834	19.852	6.512	19.852	20.893	18.161	0.906
3000.000	0.494	109.831	2999.823	19.152	7.748	19.152	20.660	22.026	0.675
3100.000	1.271	150.254	3099.811	18.043	8.704	18.043	20.033	25.752	0.950
3200.000	1.347	136.891	3199.785	16.222	10.057	16.222	19.087	31.797	0.314
3300.000	1.167	105.391	3299.762	15.094	11.842	15.094	19.185	38.116	0.704
3400.000	0.986	56.698	3399.747	15.296	13.543	15.296	20.430	41.522	0.903

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	1.007	26.373	3499.732	16.556	14.653	16.556	22.109	41.511	0.522
3600.000	1.210	9.726	3599.714	18.384	15.222	18.384	23.868	39.625	0.378
3700.000	1.802	6.293	3699.679	20.987	15.572	20.987	26.133	36.576	0.598
3800.000	1.297	335.757	3799.643	23.581	15.280	23.581	28.099	32.942	0.950
3900.000	0.713	290.073	3899.629	24.827	14.231	24.827	28.616	29.821	0.948
4000.000	0.490	243.039	3999.624	24.847	13.265	24.847	28.166	28.096	0.522
4100.000	1.117	260.577	4099.614	24.493	11.922	24.493	27.241	25.955	0.666
4200.000	1.202	219.064	4199.595	23.519	10.300	23.519	25.676	23.650	0.826
4300.000	0.635	209.408	4299.582	22.222	9.367	22.222	24.115	22.856	0.585
4400.000	1.261	213.011	4399.568	20.816	8.495	20.816	22.483	22.200	0.628
4500.000	1.392	217.349	4499.541	18.928	7.159	18.928	20.236	20.717	0.165
4600.000	1.594	238.824	4599.508	17.242	5.231	17.242	18.018	16.878	0.591
4700.000	1.372	212.713	4699.475	15.515	3.394	15.515	15.882	12.340	0.704
4800.000	0.856	198.697	4799.456	13.800	2.508	13.800	14.026	10.299	0.580
4900.000	0.331	134.095	4899.451	12.891	2.476	12.891	13.127	10.872	0.774
5000.000	0.819	125.305	4999.446	12.277	3.267	12.277	12.704	14.901	0.495
5100.000	1.320	96.321	5099.429	11.737	4.995	11.737	12.756	23.053	0.722
5200.000	1.114	112.385	5199.407	11.240	7.038	11.240	13.262	32.054	0.396
5300.000	1.131	129.235	5299.388	10.245	8.702	10.245	13.442	40.342	0.329
5400.000	1.420	96.336	5399.364	9.484	10.698	9.484	14.297	48.441	0.773
5500.000	1.307	93.424	5499.336	9.279	13.067	9.279	16.027	54.620	0.133
5600.000	1.395	107.328	5599.308	8.849	15.367	8.849	17.733	60.066	0.339
5700.000	0.963	116.914	5699.287	8.106	17.279	8.106	19.086	64.869	0.474
5800.000	1.052	103.942	5799.272	7.504	18.920	7.504	20.354	68.366	0.244
5900.000	1.287	141.130	5899.252	6.408	20.516	6.408	21.493	72.654	0.778
6000.000	1.342	108.534	5999.227	5.162	22.331	5.162	22.920	76.986	0.740
6100.000	0.813	145.461	6099.210	4.204	23.844	4.204	24.212	80.000	0.847
6200.000	0.808	124.757	6199.200	3.218	24.826	3.218	25.034	82.615	0.291
6300.000	0.942	93.395	6299.189	2.767	26.225	2.767	26.371	83.976	0.490
6400.000	0.899	108.493	6399.177	2.470	27.790	2.470	27.899	84.921	0.246
6500.000	1.467	112.609	6499.155	1.729	29.715	1.729	29.766	86.670	0.574
6600.000	1.745	106.226	6599.115	0.811	32.359	0.811	32.370	88.564	0.330
HORIZONTAL DISPLACEMENT IS 32.370 FEET AT 88.564 DEGREES									