



Company: PDC Energy

Well: Evert 20-2

API: 05-123-15979

Rig Name: Production / V.E.S.

State/County: Colorado / Weld

Latitude: 40.379, Longitude: -104.576

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: 3/11/2015 / 17:08

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	0.294	305.001	100.000	0.147	-0.210	0.147	0.257	305.001	0.294
200.000	0.447	315.690	199.997	0.573	-0.693	0.573	0.899	309.613	0.167
300.000	0.711	307.716	299.992	1.232	-1.456	1.232	1.907	310.235	0.276
400.000	0.827	301.630	399.983	1.990	-2.561	1.990	3.243	307.845	0.141
500.000	0.880	270.152	499.973	2.370	-3.943	2.370	4.601	301.008	0.466
600.000	0.764	289.555	599.963	2.595	-5.340	2.595	5.937	295.922	0.300
700.000	0.568	274.637	699.956	2.859	-6.462	2.859	7.066	293.864	0.260
800.000	0.669	293.864	799.950	3.135	-7.489	3.135	8.119	292.713	0.230
900.000	0.774	295.264	899.942	3.659	-8.634	3.659	9.378	292.968	0.106
1000.000	0.439	354.402	999.937	4.329	-9.283	4.329	10.242	295.001	0.666
1100.000	0.466	314.068	1099.934	4.993	-9.612	4.993	10.831	297.448	0.313
1200.000	0.915	297.155	1199.927	5.640	-10.615	5.640	12.020	297.983	0.488
1300.000	0.881	277.671	1299.915	6.107	-12.087	6.107	13.542	296.805	0.306
1400.000	0.901	308.109	1399.903	6.695	-13.467	6.695	15.040	296.433	0.468
1500.000	0.512	314.540	1499.896	7.494	-14.405	7.494	16.238	297.485	0.396
1600.000	0.322	308.342	1599.893	7.982	-14.944	7.982	16.943	298.108	0.195
1700.000	0.550	6.108	1699.890	8.634	-15.114	8.634	17.406	299.738	0.466
1800.000	0.956	19.593	1799.882	9.898	-14.783	9.898	17.791	303.803	0.440
1900.000	1.666	28.850	1899.855	11.957	-13.802	11.957	18.261	310.903	0.738
2000.000	1.796	34.026	1999.809	14.529	-12.224	14.529	18.987	319.925	0.203
2100.000	1.728	29.522	2099.762	17.139	-10.604	17.139	20.154	328.254	0.154
2200.000	2.112	21.738	2199.706	20.162	-9.179	20.162	22.153	335.522	0.464
2300.000	1.744	28.782	2299.649	23.207	-7.764	23.207	24.472	341.502	0.437
2400.000	1.619	43.944	2399.607	25.558	-6.051	25.558	26.265	346.680	0.460
2500.000	0.996	28.299	2499.581	27.340	-4.659	27.340	27.734	350.329	0.713
2600.000	0.960	14.327	2599.566	28.917	-4.040	28.917	29.198	352.047	0.240
2700.000	0.750	16.425	2699.555	30.357	-3.647	30.357	30.575	353.149	0.212
2800.000	0.697	62.308	2799.548	31.268	-2.924	31.268	31.404	354.658	0.566
2900.000	0.604	102.297	2899.542	31.438	-1.870	31.438	31.494	356.596	0.453
3000.000	1.054	135.313	2999.532	30.672	-0.708	30.672	30.680	358.678	0.638
3100.000	1.515	138.169	3099.506	29.033	0.820	29.033	29.045	1.619	0.466
3200.000	1.895	134.831	3199.462	26.882	2.875	26.882	27.035	6.105	0.393
3300.000	2.203	137.852	3299.398	24.291	5.338	24.291	24.871	12.393	0.326
3400.000	2.649	157.504	3399.310	20.731	7.512	20.731	22.050	19.917	0.937

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	2.365	166.520	3499.214	16.590	8.877	16.590	18.816	28.149	0.485
3600.000	2.429	150.980	3599.128	12.731	10.385	12.731	16.430	39.205	0.651
3700.000	2.863	137.372	3699.022	9.041	13.104	9.041	15.921	55.397	0.760
3800.000	2.520	151.094	3798.912	5.279	15.858	5.279	16.714	71.586	0.727
3900.000	1.989	138.311	3898.835	2.059	18.075	2.059	18.192	83.500	0.728
4000.000	1.506	135.003	3998.789	-0.166	20.158	-0.166	20.159	90.471	0.493
4100.000	1.307	141.319	4098.758	-1.986	21.800	-1.986	21.890	95.204	0.252
4200.000	1.204	135.083	4198.734	-3.620	23.255	-3.620	23.535	98.849	0.171
4300.000	0.668	84.729	4298.722	-4.311	24.577	-4.311	24.953	99.949	0.933
4400.000	0.539	11.157	4398.718	-3.796	25.249	-3.796	25.532	98.550	0.730
4500.000	0.584	351.399	4498.713	-2.830	25.263	-2.830	25.422	96.393	0.198
4600.000	0.773	329.881	4598.706	-1.743	24.849	-1.743	24.910	94.013	0.314
4700.000	0.160	297.494	4698.703	-1.096	24.387	-1.096	24.411	92.573	0.644
4800.000	0.694	313.877	4798.700	-0.612	23.827	-0.612	23.835	91.471	0.542
4900.000	0.523	253.508	4898.695	-0.322	22.953	-0.322	22.955	90.804	0.629
5000.000	0.917	264.197	4998.687	-0.532	21.719	-0.532	21.726	91.404	0.415
5100.000	0.880	208.345	5098.676	-1.290	20.558	-1.290	20.599	93.589	0.843
5200.000	0.986	239.100	5198.664	-2.408	19.455	-2.408	19.604	97.054	0.505
5300.000	0.553	202.171	5298.655	-3.296	18.535	-3.296	18.826	100.084	0.637
5400.000	0.950	192.688	5398.646	-4.552	18.171	-4.552	18.732	104.064	0.415
5500.000	1.342	219.152	5498.627	-6.270	17.249	-6.270	18.353	109.975	0.649
5600.000	0.842	206.260	5598.608	-7.837	16.184	-7.837	17.982	115.839	0.554
5700.000	0.955	224.854	5698.596	-9.087	15.271	-9.087	17.771	120.755	0.311
5800.000	0.330	233.713	5798.589	-9.849	14.451	-9.849	17.488	124.274	0.631
5900.000	0.299	268.690	5898.588	-10.025	13.958	-10.025	17.185	125.687	0.191
6000.000	0.760	233.294	5998.584	-10.427	13.165	-10.427	16.794	128.380	0.544
6100.000	0.958	226.721	6098.572	-11.396	12.025	-11.396	16.568	133.461	0.221
6200.000	1.031	184.030	6198.559	-12.867	11.354	-12.867	17.160	138.574	0.727
6300.000	1.046	179.137	6298.542	-14.676	11.304	-14.676	18.525	142.395	0.090
6400.000	0.886	201.973	6398.528	-16.306	11.029	-16.306	19.685	145.927	0.413
6500.000	0.706	261.956	6498.520	-17.109	10.130	-17.109	19.883	149.372	0.811
6600.000	0.881	252.793	6598.511	-17.423	8.785	-17.423	19.513	153.241	0.216
6700.000	1.279	286.668	6698.494	-17.330	6.982	-17.330	18.684	158.057	0.735
6800.000	1.629	259.297	6798.463	-17.274	4.516	-17.274	17.855	165.348	0.767
HORIZONTAL DISPLACEMENT IS 17.855 FEET AT 165.348 DEGREES									