



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : KB= GROUND LEVEL

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: run1-01-de_01.ut

Minimum Curvature Method

Report Date/Time: 10/3/2013 / 14:36

Vaughn Energy Services

Pinedale, Wyoming

866-835-8333

Jay Hinman

PSC 9-3

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	0.547	346.142	99.998	0.463	-0.114	0.463	0.477	346.142	0.547
200.000	0.925	351.539	199.990	1.725	-0.347	1.725	1.760	348.615	0.384
300.000	1.490	2.942	299.968	3.822	-0.399	3.822	3.843	354.035	0.611
400.000	1.565	0.361	399.932	6.486	-0.324	6.486	6.494	357.140	0.102
500.000	2.327	7.065	499.874	9.867	-0.066	9.867	9.867	359.619	0.794
600.000	2.058	5.369	599.800	13.670	0.352	13.670	13.674	1.475	0.277
700.000	2.572	16.316	699.719	17.611	1.150	17.611	17.649	3.738	0.676
800.000	2.814	11.957	799.609	22.166	2.289	22.166	22.284	5.897	0.317
900.000	3.252	17.380	899.468	27.275	3.645	27.275	27.517	7.612	0.524
1000.000	3.052	8.687	999.318	32.614	4.895	32.614	32.979	8.535	0.518
1100.000	3.009	8.709	1099.178	37.841	5.694	37.841	38.267	8.558	0.043
1200.000	3.140	8.421	1199.034	43.145	6.493	43.145	43.631	8.558	0.131
1300.000	2.635	4.930	1298.907	48.144	7.092	48.144	48.664	8.379	0.535
1400.000	2.325	2.555	1398.813	52.461	7.380	52.461	52.977	8.007	0.326
1500.000	2.387	10.522	1498.729	56.535	7.850	56.535	57.077	7.905	0.333
1600.000	2.210	8.971	1598.648	60.487	8.531	60.487	61.085	8.028	0.187
1700.000	1.986	347.403	1698.583	64.082	8.454	64.082	64.637	7.515	0.815
1800.000	2.006	2.492	1798.523	67.522	8.152	67.522	68.012	6.884	0.524
1900.000	1.717	348.766	1898.470	70.740	7.937	70.740	71.183	6.402	0.530
2000.000	1.952	3.046	1998.419	73.910	7.735	73.910	74.313	5.975	0.512
2100.000	2.011	352.093	2098.360	77.348	7.584	77.348	77.719	5.600	0.383
2200.000	1.745	356.859	2198.306	80.607	7.260	80.607	80.933	5.146	0.308
2300.000	1.907	356.564	2298.255	83.787	7.077	83.787	84.086	4.828	0.162
2400.000	1.769	1.673	2398.204	86.991	7.022	86.991	87.274	4.615	0.214
2500.000	1.498	356.187	2498.163	89.838	6.980	89.838	90.108	4.443	0.313
2600.000	1.594	356.689	2598.127	92.530	6.813	92.530	92.781	4.211	0.097
2700.000	1.443	343.674	2698.092	95.127	6.378	95.127	95.341	3.836	0.375
2800.000	1.408	354.630	2798.061	97.559	5.909	97.559	97.738	3.466	0.274
2900.000	1.278	345.431	2898.034	99.862	5.514	99.862	100.014	3.160	0.251
3000.000	1.020	337.834	2998.014	101.765	4.897	101.765	101.883	2.755	0.300
3100.000	1.118	320.130	3097.997	103.338	3.936	103.338	103.413	2.181	0.343
3200.000	1.147	299.592	3197.978	104.582	2.440	104.582	104.610	1.337	0.405
3300.000	1.184	285.398	3297.957	105.350	0.574	105.350	105.352	0.312	0.290
3400.000	1.119	267.338	3397.937	105.579	-1.397	105.579	105.588	359.242	0.367

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	0.493	237.392	3497.927	105.302	-2.735	105.302	105.337	358.512	0.734
3600.000	0.517	226.128	3597.923	104.757	-3.422	104.757	104.813	358.129	0.102
3700.000	0.786	234.009	3697.917	104.042	-4.302	104.042	104.131	357.632	0.283
3800.000	0.849	222.926	3797.907	103.096	-5.362	103.096	103.235	357.023	0.170
3900.000	0.602	178.048	3897.899	102.029	-5.849	102.029	102.196	356.719	0.599
4000.000	0.623	124.693	3997.894	101.195	-5.384	101.195	101.338	356.954	0.550
4100.000	1.060	83.841	4097.884	100.985	-4.018	100.985	101.064	357.721	0.716
4200.000	0.636	56.435	4197.873	101.391	-2.636	101.391	101.425	358.511	0.575
4300.000	0.478	11.630	4297.869	102.106	-2.090	102.106	102.128	358.828	0.449
4400.000	0.560	351.778	4397.865	102.999	-2.075	102.999	103.020	358.846	0.196
4500.000	0.987	324.533	4497.856	104.184	-2.645	104.184	104.218	358.546	0.552
4600.000	1.181	331.198	4597.838	105.789	-3.642	105.789	105.851	358.029	0.231
4700.000	0.904	327.937	4697.821	107.360	-4.557	107.360	107.457	357.570	0.283
4800.000	1.160	324.589	4797.805	108.853	-5.562	108.853	108.995	357.075	0.263
4900.000	1.152	308.103	4897.785	110.298	-6.939	110.298	110.516	356.400	0.331
5000.000	1.005	310.525	4997.767	111.488	-8.396	111.488	111.804	355.693	0.154
5100.000	0.852	280.339	5097.755	112.191	-9.793	112.191	112.618	355.011	0.505
5200.000	1.057	271.907	5197.741	112.355	-11.447	112.355	112.937	354.183	0.248
5300.000	1.075	293.177	5297.724	112.755	-13.231	112.755	113.529	353.307	0.394
5400.000	0.824	289.622	5397.710	113.366	-14.771	113.366	114.324	352.577	0.258
5500.000	0.957	242.973	5497.699	113.227	-16.192	113.227	114.379	351.862	0.716
5600.000	1.166	233.144	5597.682	112.238	-17.750	112.238	113.633	351.013	0.276
5700.000	1.200	242.407	5697.661	111.143	-19.492	111.143	112.839	350.053	0.194
5800.000	1.177	242.965	5797.640	110.191	-21.334	110.191	112.237	349.042	0.026
5900.000	1.069	217.644	5897.621	108.985	-22.819	108.985	111.349	348.175	0.503
6000.000	1.147	254.512	5997.603	107.979	-24.353	107.979	110.692	347.290	0.705
6100.000	1.345	247.927	6097.580	107.271	-26.406	107.271	110.473	346.171	0.244
6200.000	1.035	257.923	6197.558	106.641	-28.376	106.641	110.352	345.099	0.372
6300.000	1.138	254.768	6297.540	106.191	-30.218	106.191	110.407	344.116	0.119
6400.000	0.957	241.688	6397.524	105.534	-31.911	105.534	110.253	343.176	0.299
6500.000	1.059	250.175	6497.508	104.824	-33.516	104.824	110.052	342.269	0.181
6600.000	1.335	254.396	6597.486	104.198	-35.507	104.198	110.081	341.182	0.289
6700.000	1.079	252.125	6697.464	103.595	-37.525	103.595	110.182	340.088	0.260
6800.000	1.157	252.843	6797.445	103.009	-39.385	103.009	110.281	339.076	0.080
6900.000	0.807	252.457	6897.430	102.499	-41.021	102.499	110.403	338.188	0.350
7000.000	0.654	255.952	6997.422	102.148	-42.246	102.148	110.539	337.531	0.159
7100.000	0.996	283.753	7097.412	102.216	-43.644	102.216	111.144	336.879	0.517
HORIZONTAL DISPLACEMENT IS 111.144 FEET AT 336.879 DEGREES									