



Company: Synergy Resources
Well/API: Bowen 25-10/05-123-14268
Tool Type: North Seeking Rate Gyro
Rig Name: Production/CoreTech
County/State: Weld/Colorado
VS-Azi: 0.000 Degrees
Latitude: 40.28107, Longitude: -104.83758
All Azimuths referenced to True North
No Grid Correction Applied



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB= GL Elevation= 4754 Feet

DRILLOG MS GYRO SURVEY CALCULATIONS
Error Model: VESSI_GYROFLEX_SLICKLINE.IPM
Filename: msggyro_run01-01-de_01.ut
Minimum Curvature Method
Report Date/Time: 4/25/2017 / 15:36

Lat/Long Obtained by Handheld GPS at Wellhead
Handheld GPS Reference: NAD83/ Device Error: ± 9 Feet
VES Survey International- Henderson Co
Geof Davis
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	0.493	236.161	99.999	-0.239	-0.357	-0.239	0.430	236.161	0.493
200.000	0.153	142.237	199.997	-0.585	-0.632	-0.585	0.861	227.243	0.526
300.000	0.473	209.664	299.996	-1.049	-0.755	-1.049	1.292	215.729	0.438
400.000	0.631	266.862	399.992	-1.438	-1.509	-1.438	2.084	226.377	0.546
500.000	0.682	253.499	499.986	-1.637	-2.629	-1.637	3.097	238.093	0.161
600.000	0.673	271.587	599.979	-1.790	-3.787	-1.790	4.189	244.705	0.213
700.000	0.515	314.150	699.974	-1.460	-4.697	-1.460	4.919	252.731	0.456
800.000	0.689	321.407	799.968	-0.677	-5.395	-0.677	5.438	262.846	0.189
900.000	0.416	328.892	899.963	0.104	-5.958	0.104	5.959	270.996	0.282
1000.000	0.311	232.016	999.962	0.247	-6.359	0.247	6.364	272.228	0.548
1100.000	0.531	291.672	1099.960	0.252	-7.004	0.252	7.008	272.059	0.461
1200.000	0.515	246.185	1199.956	0.241	-7.846	0.241	7.850	271.762	0.405
1300.000	0.759	271.672	1299.950	0.079	-8.920	0.079	8.920	270.508	0.368
1400.000	0.518	232.671	1399.944	-0.176	-9.941	-0.176	9.943	268.987	0.483
1500.000	0.305	278.272	1499.942	-0.412	-10.565	-0.412	10.573	267.768	0.375
1600.000	0.817	278.922	1599.937	-0.263	-11.533	-0.263	11.536	268.695	0.512
1700.000	0.824	247.968	1699.927	-0.422	-12.904	-0.422	12.911	268.127	0.438
1800.000	0.526	298.613	1799.921	-0.472	-13.974	-0.472	13.982	268.066	0.637
1900.000	0.900	295.620	1899.913	0.088	-15.085	0.088	15.085	270.332	0.376
2000.000	0.833	297.733	1999.901	0.765	-16.437	0.765	16.454	272.666	0.074
2100.000	0.600	291.289	2099.893	1.294	-17.569	1.294	17.616	274.213	0.246
2200.000	0.762	320.449	2199.887	1.997	-18.480	1.997	18.588	276.167	0.377
2300.000	0.391	334.511	2299.881	2.818	-19.050	2.818	19.257	278.413	0.394
2400.000	0.240	329.029	2399.880	3.305	-19.305	3.305	19.586	279.716	0.154
2500.000	0.516	224.564	2499.878	3.164	-19.728	3.164	19.980	279.112	0.621
2600.000	0.385	342.369	2599.877	3.164	-20.146	3.164	20.392	278.924	0.774
2700.000	0.696	247.168	2699.874	3.248	-20.807	3.248	21.059	278.871	0.825
2800.000	1.032	279.273	2799.863	3.157	-22.255	3.157	22.478	278.074	0.576
2900.000	1.156	319.768	2899.846	4.072	-23.795	4.072	24.141	279.711	0.766
3000.000	1.345	292.792	2999.823	5.297	-25.529	5.297	26.072	281.722	0.611
3100.000	1.268	308.677	3099.797	6.443	-27.474	6.443	28.219	283.198	0.369
3200.000	1.397	305.547	3199.770	7.843	-29.329	7.843	30.360	284.971	0.148
3300.000	1.063	291.941	3299.747	8.898	-31.181	8.898	32.426	285.927	0.441

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
3400.000	1.438	280.838	3399.723	9.480	-33.274	9.480	34.599	285.903	0.445
3500.000	1.023	272.086	3499.700	9.749	-35.399	9.749	36.717	285.397	0.455
3600.000	0.350	262.163	3599.692	9.740	-36.594	9.740	37.868	284.904	0.681
3700.000	0.521	246.117	3699.690	9.514	-37.313	9.514	38.506	284.304	0.209
3800.000	0.631	200.645	3799.685	8.815	-37.923	8.815	38.934	283.085	0.457
3900.000	0.566	202.528	3899.680	7.844	-38.306	7.844	39.101	281.572	0.068
4000.000	0.980	214.442	3999.670	6.682	-38.979	6.682	39.547	279.728	0.442
4100.000	1.548	214.648	4099.646	4.866	-40.230	4.866	40.523	276.897	0.568
4200.000	1.697	227.548	4199.606	2.756	-42.090	2.756	42.180	273.746	0.393
4300.000	0.911	215.079	4299.579	1.107	-43.639	1.107	43.653	271.453	0.831
4400.000	1.198	201.032	4399.562	-0.519	-44.471	-0.519	44.474	269.331	0.384
4500.000	1.492	219.436	4499.535	-2.500	-45.673	-2.500	45.741	266.867	0.519
4600.000	1.291	255.819	4599.508	-3.782	-47.592	-3.782	47.742	265.457	0.890
4700.000	0.801	258.408	4699.491	-4.198	-49.369	-4.198	49.547	265.140	0.492
4800.000	1.433	250.263	4799.471	-4.761	-51.231	-4.761	51.451	264.691	0.650
4900.000	0.827	249.495	4899.451	-5.436	-53.084	-5.436	53.362	264.153	0.607
5000.000	0.795	272.650	4999.441	-5.657	-54.453	-5.657	54.746	264.069	0.327
5100.000	0.981	258.478	5099.430	-5.796	-55.984	-5.796	56.283	264.089	0.286
5200.000	0.996	243.326	5199.415	-6.357	-57.599	-6.357	57.949	263.702	0.261
5300.000	0.919	232.965	5299.401	-7.230	-59.016	-7.230	59.458	263.015	0.189
5400.000	0.668	195.691	5399.392	-8.275	-59.814	-8.275	60.384	262.124	0.560
5500.000	0.761	192.485	5499.384	-9.484	-60.115	-9.484	60.859	261.035	0.102
5600.000	0.627	161.082	5599.377	-10.650	-60.082	-10.650	61.018	259.948	0.397
5700.000	0.842	169.785	5699.369	-11.890	-59.774	-11.890	60.945	258.750	0.242
5800.000	0.261	203.206	5799.364	-12.822	-59.734	-12.822	61.094	257.885	0.640
5900.000	0.192	294.064	5899.364	-12.963	-59.976	-12.963	61.361	257.804	0.326
6000.000	0.141	257.217	5999.363	-12.922	-60.249	-12.922	61.619	257.895	0.116
6100.000	0.469	263.510	6099.362	-12.995	-60.775	-12.995	62.149	257.930	0.329
6130.000	0.721	274.245	6129.360	-12.995	-61.085	-12.995	62.452	257.990	0.915
HORIZONTAL DISPLACEMENT IS 62.452 FEET AT 257.990 DEGREES									