

Company: Anadarko Petroleum Corp.

Well: HSR-Sherry 5-28

API: 05-123-17935

Rig Name: Production/Coretech

State/County: Colorado/Weld

Latitude: 40.199, Longitude: -104.902

Directions are relative to True North

VS-Azi: 0.000 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB=Ground Level

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro\_run01-01-de\_01.ut

Minimum Curvature Method

Report Date/Time: 11/30/2013 / 10:34

Vaughn Energy Services

Henderson, CO

303-853-4976

Levi Sheldon

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	0.627	272.489	99.998	0.024	-0.547	0.024	0.547	272.489	0.627
200.000	1.251	276.705	199.984	0.175	-2.177	0.175	2.185	274.594	0.627
300.000	2.059	290.425	299.942	0.929	-4.945	0.929	5.031	280.643	0.894
400.000	2.383	286.832	399.867	2.158	-8.618	2.158	8.884	284.059	0.353
500.000	2.286	287.979	499.784	3.376	-12.505	3.376	12.952	285.107	0.108
600.000	2.244	290.989	599.706	4.692	-16.229	4.692	16.894	286.126	0.126
700.000	2.405	291.754	699.623	6.171	-20.006	6.171	20.936	287.144	0.164
800.000	2.492	290.743	799.532	7.719	-23.988	7.719	25.199	287.838	0.097
900.000	2.624	299.524	899.433	9.617	-28.012	9.617	29.617	288.948	0.413
1000.000	2.712	300.605	999.324	11.949	-32.040	11.949	34.196	290.453	0.102
1100.000	2.822	301.187	1099.208	14.429	-36.183	14.429	38.954	291.741	0.114
1200.000	2.874	298.046	1199.084	16.882	-40.502	16.882	43.879	292.628	0.164
1300.000	2.780	299.812	1298.963	19.267	-44.818	19.267	48.784	293.262	0.128
1400.000	2.597	299.541	1398.852	21.589	-48.893	21.589	53.448	293.824	0.183
1500.000	2.539	289.128	1498.753	23.432	-52.957	23.432	57.910	293.868	0.470
1600.000	1.931	274.008	1598.677	24.276	-56.730	24.276	61.706	293.167	0.842
1700.000	1.849	297.772	1698.624	25.145	-59.839	25.145	64.907	292.793	0.782
1800.000	1.625	292.673	1798.578	26.444	-62.575	26.444	67.933	292.909	0.272
1900.000	1.346	273.401	1898.545	27.060	-65.056	27.060	70.459	292.585	0.568
2000.000	0.927	260.572	1998.525	26.997	-67.026	26.997	72.259	291.939	0.487
2100.000	0.988	263.677	2098.511	26.770	-68.681	26.770	73.713	291.294	0.080
2200.000	0.906	218.613	2198.499	26.057	-70.031	26.057	74.722	290.409	0.730
2300.000	0.807	217.652	2298.488	24.882	-70.954	24.882	75.191	289.324	0.101
2400.000	0.849	216.196	2398.477	23.727	-71.822	23.727	75.640	288.281	0.047
2500.000	0.863	222.441	2498.466	22.573	-72.768	22.573	76.188	287.234	0.094
2600.000	1.049	230.442	2598.452	21.435	-73.981	21.435	77.024	286.158	0.229
2700.000	1.072	229.862	2698.435	20.249	-75.402	20.249	78.074	285.032	0.025
2800.000	1.139	239.810	2798.417	19.146	-76.976	19.146	79.321	283.968	0.203
2900.000	1.132	248.269	2898.397	18.281	-78.753	18.281	80.846	283.069	0.168
3000.000	1.042	260.973	2998.379	17.772	-80.568	17.772	82.505	282.440	0.257
3100.000	0.970	280.977	3098.364	17.791	-82.297	17.791	84.198	282.199	0.356
3200.000	0.762	315.846	3198.353	18.430	-83.591	18.430	85.599	282.433	0.556
3300.000	0.069	347.367	3298.350	18.965	-84.068	18.965	86.180	282.713	0.705
3400.000	0.733	170.017	3398.348	18.394	-83.970	18.394	85.961	282.356	0.802

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	1.389	198.415	3498.331	16.614	-84.242	16.614	85.865	281.157	0.822
3600.000	1.286	204.570	3598.303	14.443	-85.092	14.443	86.309	279.633	0.176
3700.000	1.338	197.143	3698.277	12.306	-85.903	12.306	86.780	278.153	0.178
3800.000	1.286	194.558	3798.251	10.104	-86.529	10.104	87.117	276.660	0.079
3900.000	1.360	173.119	3898.225	7.839	-86.669	7.839	87.023	275.169	0.498
4000.000	0.869	130.663	3998.207	6.167	-85.951	6.167	86.172	274.104	0.928
4100.000	0.687	78.092	4098.199	5.797	-84.789	5.797	84.987	273.911	0.708
4200.000	0.933	8.909	4198.191	6.725	-84.076	6.725	84.345	274.573	0.942
4300.000	1.104	354.785	4298.176	8.488	-84.038	8.488	84.465	275.768	0.302
4400.000	0.521	352.276	4398.165	9.898	-84.186	9.898	84.766	276.705	0.584
4500.000	0.344	53.634	4498.163	10.526	-84.006	10.526	84.663	277.142	0.466
4600.000	0.308	77.231	4598.161	10.763	-83.502	10.763	84.193	277.345	0.138
4700.000	0.235	42.391	4698.160	10.974	-83.101	10.974	83.822	277.523	0.177
4800.000	0.264	63.791	4798.159	11.228	-82.756	11.228	83.514	277.726	0.097
4900.000	0.413	29.167	4898.157	11.644	-82.374	11.644	83.193	278.045	0.246
5000.000	0.491	27.052	4998.154	12.340	-82.004	12.340	82.927	278.557	0.080
5100.000	0.922	20.867	5098.146	13.472	-81.523	13.472	82.628	279.384	0.437
5200.000	1.277	18.542	5198.128	15.280	-80.882	15.280	82.313	280.698	0.358
5300.000	1.487	18.508	5298.099	17.567	-80.116	17.567	82.019	282.367	0.210
5400.000	1.745	26.973	5398.059	20.154	-79.013	20.154	81.543	284.309	0.351
5500.000	1.566	358.471	5498.019	22.876	-78.359	22.876	81.630	286.275	0.833
5600.000	1.087	347.012	5597.992	25.167	-78.609	25.167	82.539	287.752	0.545
5700.000	0.944	359.043	5697.976	26.915	-78.836	26.915	83.304	288.850	0.256
5800.000	1.098	6.194	5797.961	28.691	-78.746	28.691	83.810	290.019	0.200
5900.000	1.067	350.629	5897.943	30.562	-78.795	30.562	84.514	291.200	0.295
6000.000	1.096	19.337	5997.926	32.384	-78.629	32.384	85.037	292.384	0.537
6100.000	1.227	352.482	6097.906	34.347	-78.453	34.347	85.642	293.644	0.554
6200.000	1.351	359.500	6197.881	36.587	-78.603	36.587	86.701	294.960	0.201
6300.000	1.505	358.186	6297.850	39.078	-78.655	39.078	87.828	296.420	0.158
6400.000	1.497	356.185	6397.815	41.694	-78.783	41.694	89.136	297.889	0.053
6500.000	1.542	345.397	6497.780	44.299	-79.209	44.299	90.755	299.217	0.289
6600.000	2.110	326.665	6597.730	47.138	-80.560	47.138	93.338	300.333	0.817
6700.000	2.612	331.603	6697.645	50.680	-82.655	50.680	96.955	301.515	0.541
6800.000	2.881	346.365	6797.531	55.127	-84.331	55.127	100.750	303.172	0.754
HORIZONTAL DISPLACEMENT IS 100.750 FEET AT 303.172 DEGREES									