

Company: Anadarko Petroleum Corp.  
 Well/API: UPRR 43 Pan Am UT Y #1/05-123-12547  
 Tool Type: North Seeking Rate Gyro  
 Rig Name: Production/ CoreTech  
 County/State: Weld County / Colorado  
 Latitude: 40.057, Longitude: -104.973  
 Directions are relative to True North  
 VS-Azi: 0.000 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB = GL Elevation = 5079 ft

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: run1-01-de\_01.ut  
 Minimum Curvature Method  
 Report Date/Time: 1/27/2015 / 17:51

Lat/Long Obtained By Handheld GPS At Wellhead  
 Handheld GPS Reference: NAD83/Device Error: ±9 Feet  
 VES Survey International - Henderson CO  
 Jay Hinman  
 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	0.465	109.535	99.999	-0.136	0.382	-0.136	0.406	109.535	0.465
200.000	0.284	143.429	199.997	-0.470	0.912	-0.470	1.026	117.271	0.279
300.000	0.332	172.858	299.995	-0.957	1.096	-0.957	1.455	131.125	0.163
400.000	0.414	213.513	399.993	-1.546	0.932	-1.546	1.805	148.905	0.270
500.000	0.681	216.343	499.989	-2.326	0.381	-2.326	2.357	170.705	0.268
600.000	0.339	238.279	599.985	-2.960	-0.223	-2.960	2.969	184.316	0.387
700.000	0.745	267.882	699.980	-3.140	-1.125	-3.140	3.336	199.717	0.480
800.000	0.469	254.686	799.975	-3.272	-2.170	-3.272	3.927	213.555	0.308
900.000	0.695	283.987	899.970	-3.234	-3.154	-3.234	4.517	224.288	0.367
1000.000	0.765	259.782	999.962	-3.205	-4.400	-3.205	5.444	233.926	0.313
1100.000	0.830	275.889	1099.952	-3.249	-5.777	-3.249	6.628	240.643	0.233
1200.000	0.773	279.369	1199.942	-3.065	-7.163	-3.065	7.791	246.830	0.075
1300.000	0.674	294.156	1299.934	-2.715	-8.364	-2.715	8.794	252.017	0.210
1400.000	0.588	297.731	1399.928	-2.236	-9.355	-2.236	9.618	256.559	0.094
1500.000	0.215	311.774	1499.926	-1.872	-9.948	-1.872	10.123	259.341	0.383
1600.000	0.603	295.727	1599.923	-1.519	-10.562	-1.519	10.671	261.816	0.402
1700.000	0.623	298.712	1699.917	-1.029	-11.514	-1.029	11.560	264.892	0.038
1800.000	0.539	314.452	1799.912	-0.439	-12.326	-0.439	12.334	267.962	0.180
1900.000	0.176	94.444	1899.911	-0.121	-12.509	-0.121	12.509	269.444	0.683
2000.000	0.563	30.429	1999.909	0.290	-12.106	0.290	12.110	271.374	0.511
2100.000	0.134	353.979	2099.907	0.831	-11.870	0.831	11.899	274.004	0.462
2200.000	0.048	179.615	2199.907	0.905	-11.882	0.905	11.916	274.358	0.182
2300.000	0.302	216.530	2299.906	0.652	-12.038	0.652	12.056	273.099	0.265
2400.000	0.746	256.698	2399.902	0.291	-12.828	0.291	12.831	271.297	0.551
2500.000	0.799	266.828	2499.893	0.102	-14.158	0.102	14.158	270.414	0.147
2600.000	0.943	269.016	2599.882	0.050	-15.677	0.050	15.677	270.181	0.147
2700.000	1.147	273.874	2699.865	0.103	-17.498	0.103	17.498	270.337	0.223
2800.000	1.309	266.918	2799.842	0.109	-19.637	0.109	19.638	270.319	0.220
2900.000	1.038	266.152	2899.821	-0.013	-21.682	-0.013	21.682	269.966	0.271
3000.000	0.826	270.800	2999.808	-0.064	-23.307	-0.064	23.307	269.844	0.225
3100.000	1.201	252.609	3099.792	-0.367	-25.028	-0.367	25.031	269.160	0.490
3200.000	1.494	269.142	3199.765	-0.700	-27.332	-0.700	27.340	268.533	0.484
3300.000	1.663	276.484	3299.727	-0.555	-30.076	-0.555	30.081	268.942	0.263

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
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HORIZONTAL DISPLACEMENT IS  
30.081 FEET AT 268.942 DEGREES