



Company: Anadarko Petroleum Corp.
 Well/API: Davis 7-14/05-123-21917
 Tool Type: North Seeking Rate Gyro
 Rig Name: Production/Summit
 County/State: Weld/Colorado
 Latitude: 40.139, Longitude: -104.856
 GRID North is 0.000 Degrees West of True North
 VS-Azi: 0.000 Degrees



Depth Reference : RKB = GL Elevation = 4920 Feet

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyrosurvey.ut

Minimum Curvature Method

Report Date/Time: 12/27/2018 / 13:10

Lat/Long & Elevation Obtained By Handheld GPS At Wellhead

Handheld GPS Reference: NAD83/Device Error: ±9 Feet

VES Survey International - Commerce City, CO

Justin Williams / Davis 7-14 / API: 05-123-21917

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	0.396	149.480	99.999	-0.298	0.176	-0.298	0.346	149.480	0.396
200.000	0.053	117.097	199.998	-0.616	0.392	-0.616	0.731	147.542	0.353
300.000	0.065	70.798	299.998	-0.619	0.486	-0.619	0.787	141.832	0.047
400.000	0.090	46.957	399.998	-0.547	0.597	-0.547	0.810	132.474	0.040
500.000	0.089	49.414	499.998	-0.443	0.713	-0.443	0.840	121.818	0.004
600.000	0.100	37.953	599.998	-0.324	0.826	-0.324	0.887	111.402	0.022
700.000	0.124	19.427	699.998	-0.153	0.915	-0.153	0.928	99.497	0.043
800.000	0.059	255.340	799.998	-0.064	0.901	-0.064	0.903	94.076	0.165
900.000	0.308	220.065	899.997	-0.283	0.678	-0.283	0.735	112.637	0.262
1000.000	0.287	217.560	999.996	-0.687	0.353	-0.687	0.772	152.807	0.025
1100.000	0.273	235.905	1099.995	-1.019	0.003	-1.019	1.019	179.817	0.090
1200.000	0.300	233.310	1199.993	-1.308	-0.404	-1.308	1.369	197.145	0.030
1300.000	0.365	251.399	1299.992	-1.566	-0.915	-1.566	1.814	210.294	0.122

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
1400.000	0.446	268.638	1399.989	-1.677	-1.606	-1.677	2.322	223.755	0.146
1500.000	0.549	269.381	1499.985	-1.691	-2.474	-1.691	2.997	235.642	0.104
1600.000	0.678	273.652	1599.980	-1.659	-3.544	-1.659	3.913	244.919	0.137
1700.000	0.682	277.975	1699.973	-1.538	-4.725	-1.538	4.969	251.964	0.051
1800.000	0.789	277.704	1799.964	-1.364	-5.997	-1.364	6.150	257.190	0.107
1900.000	0.742	279.298	1899.955	-1.167	-7.318	-1.167	7.410	260.942	0.052
2000.000	0.632	300.040	1999.948	-0.786	-8.434	-0.786	8.470	264.675	0.270
2100.000	0.539	347.786	2099.944	-0.050	-9.010	-0.050	9.011	269.679	0.481
2200.000	0.974	27.959	2199.935	1.160	-8.711	1.160	8.788	277.587	0.661
2300.000	1.055	32.549	2299.920	2.687	-7.817	2.687	8.266	288.972	0.115
2400.000	1.302	33.463	2399.898	4.411	-6.696	4.411	8.018	303.376	0.247
2500.000	1.437	32.378	2499.870	6.418	-5.398	6.418	8.386	319.933	0.138
2600.000	1.632	31.433	2599.834	8.692	-3.984	8.692	9.561	335.378	0.197
2700.000	1.560	29.839	2699.795	11.088	-2.563	11.088	11.381	346.983	0.085
2800.000	1.459	30.082	2799.760	13.370	-1.248	13.370	13.428	354.667	0.102
2900.000	1.363	34.074	2899.730	15.456	0.056	15.456	15.456	0.207	0.137
3000.000	1.084	36.693	2999.707	17.200	1.287	17.200	17.248	4.280	0.284
3100.000	0.905	37.609	3099.692	18.584	2.335	18.584	18.730	7.160	0.179
3200.000	0.740	47.271	3199.682	19.648	3.291	19.648	19.922	9.509	0.215
3300.000	0.811	56.122	3299.673	20.480	4.353	20.480	20.938	11.999	0.139
3400.000	1.109	59.900	3399.659	21.360	5.778	21.360	22.128	15.135	0.305
3500.000	1.237	51.038	3499.638	22.524	7.454	22.524	23.725	18.311	0.221
3600.000	1.425	17.705	3599.612	24.388	8.671	24.388	25.883	19.573	0.785
3700.000	1.675	19.260	3699.576	26.952	9.531	26.952	28.588	19.476	0.253
3800.000	1.427	24.601	3799.539	29.464	10.532	29.464	31.289	19.670	0.286
3900.000	1.176	12.578	3899.513	31.598	11.274	31.598	33.549	19.636	0.370
4000.000	1.132	14.585	3999.493	33.555	11.746	33.555	35.552	19.293	0.060
4100.000	0.843	44.569	4099.479	35.035	12.511	35.035	37.202	19.652	0.582
4200.000	1.410	81.868	4199.460	35.733	14.245	35.733	38.468	21.734	0.899
4300.000	1.839	80.867	4299.420	36.162	17.047	36.162	39.979	25.240	0.431
4400.000	1.917	84.790	4399.366	36.569	20.298	36.569	41.824	29.033	0.150
4500.000	1.344	77.013	4499.325	36.984	23.106	36.984	43.609	31.995	0.613
4600.000	1.490	91.723	4599.295	37.209	25.548	37.209	45.135	34.474	0.391
4700.000	0.936	112.057	4699.273	36.863	27.605	36.863	46.053	36.828	0.693
4800.000	0.967	117.314	4799.259	36.169	29.112	36.169	46.429	38.831	0.092

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
4900.000	1.098	83.816	4899.243	35.885	30.815	35.885	47.300	40.653	0.608
5000.000	0.945	72.358	4999.228	36.238	32.553	36.238	48.713	41.934	0.255
5100.000	1.064	93.040	5099.212	36.439	34.266	36.439	50.020	43.240	0.379
5200.000	0.465	111.691	5199.203	36.240	35.570	36.240	50.779	44.466	0.641
5300.000	1.208	122.043	5299.192	35.530	36.840	35.530	51.182	46.037	0.756
5400.000	0.942	113.299	5399.174	34.646	38.489	34.646	51.785	48.008	0.312
5500.000	1.131	103.869	5499.158	34.085	40.201	34.085	52.706	49.707	0.254
5600.000	1.670	90.811	5599.128	33.827	42.616	33.827	54.410	51.558	0.623
5700.000	0.846	80.854	5699.103	33.924	44.801	33.924	56.196	52.866	0.850
5800.000	1.321	95.430	5799.085	33.932	46.677	33.932	57.707	53.984	0.546
5900.000	1.218	91.746	5899.061	33.791	48.887	33.791	59.428	55.348	0.131
6000.000	1.587	76.704	5999.031	34.077	51.297	34.077	61.584	56.404	0.518
6100.000	1.482	68.427	6098.995	34.871	53.848	34.871	64.153	57.073	0.245
6200.000	1.468	53.004	6198.962	36.118	56.074	36.118	66.699	57.214	0.396
6300.000	1.385	66.722	6298.932	37.366	58.208	37.366	69.169	57.302	0.351
6400.000	2.197	62.899	6398.882	38.717	61.024	38.717	72.270	57.607	0.820
6500.000	1.815	56.577	6498.821	40.463	64.052	40.463	75.763	57.719	0.441
6600.000	1.935	53.141	6598.767	42.348	66.725	42.348	79.029	57.598	0.164
6700.000	1.976	64.391	6698.709	44.106	69.631	44.106	82.424	57.649	0.385
6800.000	1.812	56.542	6798.655	45.723	72.504	45.723	85.717	57.764	0.307
6900.000	1.703	66.494	6898.608	47.187	75.186	47.187	88.767	57.887	0.324
7000.000	1.949	73.935	6998.557	48.250	78.183	48.250	91.873	58.319	0.341
7100.000	2.310	72.143	7098.488	49.339	81.735	49.339	95.472	58.883	0.367
7200.000	2.272	71.418	7198.408	50.589	85.533	50.589	99.373	59.398	0.047
7300.000	1.854	64.412	7298.343	51.919	88.871	51.919	102.926	59.706	0.488
7400.000	2.129	64.770	7398.283	53.410	92.011	53.410	106.389	59.866	0.275

HORIZONTAL DISPLACEMENT IS
106.389 FEET AT 59.866 DEGREES