



**Company:** Anadarko Petroleum Corp

**Rig:** Production / Cable

**Latitude:** 40.212

**Longitude:** -104.742

**API #** 05-123-13300

**Date:** 2/22/12

**Well:** Kugel UPRR 32-23

**Location:** Weld County, Colorado

**North Reference:** TRUE North

**Depth Reference:** RKB = Ground Level

**Surveyor:** Robert Davis

**VS:** 0.000

Field copy only not definitive.

| Depth    | Inc   | AzG     | N/-S   | E/-W    | TVD      | DL    | VS     | CD     | Cbrg    |
|----------|-------|---------|--------|---------|----------|-------|--------|--------|---------|
| 0.000    | 0.000 | 0.000   | 0.000  | 0.000   | 0.000    | ****  | 0.000  | 0.000  | 0.000   |
| 100.000  | 0.788 | 155.551 | -0.626 | 0.285   | 99.997   | 0.788 | -0.626 | 0.688  | 155.551 |
| 200.000  | 1.103 | 163.011 | -2.172 | 0.850   | 199.983  | 0.337 | -2.172 | 2.332  | 158.621 |
| 300.000  | 0.427 | 205.290 | -3.429 | 0.972   | 299.974  | 0.837 | -3.429 | 3.564  | 164.173 |
| 400.000  | 0.360 | 224.869 | -3.989 | 0.591   | 399.972  | 0.149 | -3.989 | 4.033  | 171.573 |
| 500.000  | 0.180 | 293.997 | -4.148 | 0.226   | 499.971  | 0.341 | -4.148 | 4.154  | 176.883 |
| 600.000  | 0.341 | 227.103 | -4.287 | -0.135  | 599.970  | 0.317 | -4.287 | 4.289  | 181.808 |
| 700.000  | 0.178 | 229.369 | -4.591 | -0.471  | 699.969  | 0.163 | -4.591 | 4.615  | 185.863 |
| 800.000  | 0.450 | 223.982 | -4.975 | -0.862  | 799.967  | 0.273 | -4.975 | 5.049  | 189.833 |
| 900.000  | 0.298 | 253.940 | -5.330 | -1.385  | 899.965  | 0.243 | -5.330 | 5.507  | 194.568 |
| 1000.000 | 0.368 | 247.130 | -5.526 | -1.931  | 999.964  | 0.080 | -5.526 | 5.854  | 199.259 |
| 1100.000 | 0.429 | 244.909 | -5.810 | -2.566  | 1099.961 | 0.063 | -5.810 | 6.351  | 203.826 |
| 1200.000 | 0.650 | 262.859 | -6.039 | -3.467  | 1199.957 | 0.275 | -6.039 | 6.964  | 209.861 |
| 1300.000 | 0.590 | 269.181 | -6.117 | -4.545  | 1299.951 | 0.090 | -6.117 | 7.621  | 216.612 |
| 1400.000 | 0.595 | 270.616 | -6.119 | -5.579  | 1399.946 | 0.016 | -6.119 | 8.281  | 222.360 |
| 1500.000 | 0.715 | 277.817 | -6.028 | -6.717  | 1499.939 | 0.145 | -6.028 | 9.026  | 228.094 |
| 1600.000 | 0.692 | 316.136 | -5.508 | -7.754  | 1599.932 | 0.462 | -5.508 | 9.511  | 234.614 |
| 1700.000 | 0.884 | 296.909 | -4.723 | -8.861  | 1699.923 | 0.324 | -4.723 | 10.041 | 241.941 |
| 1800.000 | 0.782 | 305.635 | -3.976 | -10.103 | 1799.912 | 0.162 | -3.976 | 10.858 | 248.518 |
| 1900.000 | 0.929 | 302.366 | -3.145 | -11.343 | 1899.901 | 0.154 | -3.145 | 11.770 | 254.505 |
| 2000.000 | 0.911 | 306.582 | -2.237 | -12.666 | 1999.888 | 0.070 | -2.237 | 12.862 | 259.984 |
| 2100.000 | 0.952 | 301.485 | -1.329 | -14.012 | 2099.875 | 0.092 | -1.329 | 14.075 | 264.580 |
| 2200.000 | 1.122 | 322.328 | -0.121 | -15.319 | 2199.859 | 0.411 | -0.121 | 15.319 | 269.549 |
| 2300.000 | 0.942 | 313.063 | 1.216  | -16.518 | 2299.843 | 0.245 | 1.216  | 16.563 | 274.211 |
| 2400.000 | 1.057 | 320.076 | 2.485  | -17.711 | 2399.828 | 0.167 | 2.485  | 17.884 | 277.987 |
| 2500.000 | 1.363 | 330.255 | 4.225  | -18.893 | 2499.805 | 0.373 | 4.225  | 19.359 | 282.606 |
| 2600.000 | 0.999 | 331.972 | 6.028  | -19.893 | 2599.784 | 0.366 | 6.028  | 20.786 | 286.858 |
| 2700.000 | 0.732 | 357.463 | 7.435  | -20.331 | 2699.773 | 0.463 | 7.435  | 21.648 | 290.089 |
| 2800.000 | 0.359 | 358.743 | 8.386  | -20.366 | 2799.768 | 0.373 | 8.386  | 22.025 | 292.381 |
| 2900.000 | 0.369 | 10.960  | 9.016  | -20.312 | 2899.766 | 0.078 | 9.016  | 22.223 | 293.936 |
| 3000.000 | 0.400 | 2.308   | 9.682  | -20.236 | 2999.764 | 0.066 | 9.682  | 22.433 | 295.568 |
| 3100.000 | 0.507 | 344.966 | 10.458 | -20.337 | 3099.761 | 0.173 | 10.458 | 22.868 | 297.213 |
| 3200.000 | 0.253 | 313.949 | 11.039 | -20.611 | 3199.758 | 0.318 | 11.039 | 23.381 | 298.172 |
| 3300.000 | 0.691 | 150.491 | 10.667 | -20.473 | 3299.757 | 0.936 | 10.667 | 23.085 | 297.521 |
| 3400.000 | 0.808 | 131.940 | 9.671  | -19.652 | 3399.748 | 0.268 | 9.671  | 21.903 | 296.204 |
| 3500.000 | 0.620 | 145.780 | 8.753  | -18.823 | 3499.740 | 0.253 | 8.753  | 20.758 | 294.938 |
| 3600.000 | 0.401 | 192.292 | 7.963  | -18.593 | 3599.737 | 0.451 | 7.963  | 20.226 | 293.185 |
| 3700.000 | 0.369 | 218.733 | 7.370  | -18.869 | 3699.735 | 0.179 | 7.370  | 20.257 | 291.334 |

|          |       |         |        |         |          |       |        |        |         |
|----------|-------|---------|--------|---------|----------|-------|--------|--------|---------|
| 3800.000 | 0.459 | 279.500 | 7.184  | -19.466 | 3799.732 | 0.426 | 7.184  | 20.749 | 290.258 |
| 3900.000 | 0.589 | 296.541 | 7.480  | -20.320 | 3899.728 | 0.201 | 7.480  | 21.653 | 290.209 |
| 4000.000 | 0.612 | 277.622 | 7.780  | -21.309 | 3999.723 | 0.199 | 7.780  | 22.685 | 290.058 |
| 4100.000 | 0.613 | 279.922 | 7.943  | -22.365 | 4099.717 | 0.025 | 7.943  | 23.733 | 289.553 |
| 4200.000 | 0.569 | 282.625 | 8.144  | -23.376 | 4199.712 | 0.052 | 8.144  | 24.754 | 289.208 |
| 4300.000 | 0.781 | 272.245 | 8.279  | -24.540 | 4299.705 | 0.244 | 8.279  | 25.899 | 288.642 |
| 4400.000 | 1.320 | 271.373 | 8.333  | -26.372 | 4399.688 | 0.539 | 8.333  | 27.658 | 287.536 |
| 4500.000 | 1.534 | 287.005 | 8.752  | -28.803 | 4499.657 | 0.442 | 8.752  | 30.104 | 286.902 |
| 4600.000 | 1.711 | 290.268 | 9.661  | -31.483 | 4599.617 | 0.200 | 9.661  | 32.932 | 287.059 |
| 4700.000 | 1.736 | 293.389 | 10.779 | -34.274 | 4699.572 | 0.097 | 10.779 | 35.929 | 287.458 |
| 4800.000 | 1.439 | 305.598 | 12.111 | -36.685 | 4799.534 | 0.448 | 12.111 | 38.632 | 288.270 |
| 4900.000 | 1.769 | 299.738 | 13.608 | -39.046 | 4899.494 | 0.368 | 13.608 | 41.349 | 289.214 |
| 5000.000 | 1.883 | 308.582 | 15.398 | -41.670 | 4999.444 | 0.303 | 15.398 | 44.424 | 290.280 |
| 5100.000 | 2.009 | 306.384 | 17.462 | -44.365 | 5099.386 | 0.147 | 17.462 | 47.678 | 291.484 |
| 5200.000 | 1.708 | 306.162 | 19.381 | -46.980 | 5199.333 | 0.301 | 19.381 | 50.820 | 292.418 |
| 5300.000 | 1.601 | 312.346 | 21.201 | -49.215 | 5299.292 | 0.208 | 21.201 | 53.588 | 293.306 |
| 5400.000 | 1.332 | 306.594 | 22.835 | -51.181 | 5399.259 | 0.306 | 22.835 | 56.044 | 294.045 |
| 5500.000 | 1.280 | 310.073 | 24.247 | -52.969 | 5499.233 | 0.095 | 24.247 | 58.255 | 294.596 |
| 5600.000 | 1.008 | 307.181 | 25.497 | -54.524 | 5599.213 | 0.278 | 25.497 | 60.191 | 295.062 |
| 5700.000 | 0.626 | 297.123 | 26.278 | -55.711 | 5699.203 | 0.406 | 26.278 | 61.598 | 295.252 |
| 5800.000 | 1.025 | 287.187 | 26.791 | -57.052 | 5799.192 | 0.422 | 26.791 | 63.029 | 295.155 |
| 5900.000 | 0.915 | 272.629 | 27.092 | -58.703 | 5899.178 | 0.269 | 27.092 | 64.654 | 294.774 |
| 6000.000 | 0.336 | 291.656 | 27.237 | -59.773 | 5999.172 | 0.607 | 27.237 | 65.686 | 294.498 |
| 6100.000 | 0.275 | 240.483 | 27.227 | -60.254 | 6099.170 | 0.269 | 27.227 | 66.120 | 294.317 |
| 6200.000 | 0.594 | 218.232 | 26.702 | -60.783 | 6199.167 | 0.355 | 26.702 | 66.389 | 293.716 |
| 6300.000 | 0.337 | 234.174 | 26.123 | -61.342 | 6299.164 | 0.285 | 26.123 | 66.673 | 293.067 |
| 6400.000 | 0.557 | 275.902 | 26.000 | -62.064 | 6399.161 | 0.379 | 26.000 | 67.290 | 292.730 |
| 6500.000 | 0.726 | 255.290 | 25.890 | -63.160 | 6499.155 | 0.283 | 25.890 | 68.261 | 292.289 |
| 6600.000 | 1.028 | 259.699 | 25.568 | -64.655 | 6599.143 | 0.310 | 25.568 | 69.528 | 291.577 |
| 6700.000 | 1.123 | 260.786 | 25.251 | -66.506 | 6699.126 | 0.097 | 25.251 | 71.138 | 290.791 |
| 6800.000 | 1.141 | 273.332 | 25.152 | -68.467 | 6799.106 | 0.248 | 25.152 | 72.941 | 290.171 |
| 6900.000 | 0.874 | 280.634 | 25.351 | -70.211 | 6899.091 | 0.295 | 25.351 | 74.647 | 289.853 |
| 7000.000 | 1.333 | 271.430 | 25.520 | -72.123 | 6999.072 | 0.490 | 25.520 | 76.505 | 289.486 |
| 7100.000 | 1.502 | 260.473 | 25.332 | -74.579 | 7099.042 | 0.319 | 25.332 | 78.764 | 288.761 |
| 7200.000 | 1.503 | 279.916 | 25.341 | -77.164 | 7199.008 | 0.507 | 25.341 | 81.219 | 288.181 |
| 7300.000 | 1.144 | 293.433 | 25.964 | -79.372 | 7298.981 | 0.473 | 25.964 | 83.511 | 288.114 |