



Company: Anadarko Petroleum

Rig: Production/ Warrior

Latitude: 40.147753

Longitude: -104.752026

API # 05-123-19783

Date: 7/26/11

Well: HSR-Cannon Land 13-11A

Location: Weld County, Colorado

North Reference: True North

Depth Reference: RKB= Ground Level

Surveyor: Sean Bratt

VS: 0.000

Field copy only not definitive.

| Depth | Inc | AzG | N/-S | E/-W | TVD | DL | VS | CD | Cbgr |
|---------|------|--------|--------|--------|---------|------|--------|--------|--------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | **** | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.72 | 171.21 | -0.62 | 0.10 | 100.00 | 0.72 | -0.62 | 0.63 | 171.21 |
| 200.00 | 0.48 | 195.02 | -1.64 | 0.08 | 199.99 | 0.34 | -1.64 | 1.64 | 177.11 |
| 300.00 | 0.39 | 149.71 | -2.34 | 0.15 | 299.99 | 0.35 | -2.34 | 2.35 | 176.40 |
| 400.00 | 0.30 | 50.38 | -2.47 | 0.52 | 399.99 | 0.53 | -2.47 | 2.52 | 168.00 |
| 500.00 | 0.37 | 158.22 | -2.60 | 0.85 | 499.99 | 0.55 | -2.60 | 2.74 | 161.91 |
| 600.00 | 0.40 | 293.08 | -2.77 | 0.65 | 599.99 | 0.71 | -2.77 | 2.84 | 166.81 |
| 700.00 | 0.41 | 243.32 | -2.79 | 0.01 | 699.98 | 0.34 | -2.79 | 2.79 | 179.84 |
| 800.00 | 0.43 | 138.30 | -3.23 | -0.06 | 799.98 | 0.66 | -3.23 | 3.23 | 181.10 |
| 900.00 | 0.39 | 149.88 | -3.80 | 0.36 | 899.98 | 0.09 | -3.80 | 3.82 | 174.62 |
| 1000.00 | 0.26 | 302.72 | -3.97 | 0.34 | 999.98 | 0.63 | -3.97 | 3.99 | 175.12 |
| 1100.00 | 1.04 | 349.75 | -2.96 | -0.01 | 1099.97 | 0.88 | -2.96 | 2.96 | 180.21 |
| 1200.00 | 1.03 | 329.00 | -1.30 | -0.63 | 1199.96 | 0.37 | -1.30 | 1.45 | 205.98 |
| 1300.00 | 0.77 | 329.37 | 0.05 | -1.44 | 1299.94 | 0.26 | 0.05 | 1.44 | 271.90 |
| 1400.00 | 0.79 | 349.89 | 1.30 | -1.90 | 1399.94 | 0.28 | 1.30 | 2.31 | 304.38 |
| 1500.00 | 1.39 | 342.08 | 3.13 | -2.40 | 1499.92 | 0.62 | 3.13 | 3.94 | 322.55 |
| 1600.00 | 1.77 | 333.80 | 5.67 | -3.45 | 1599.88 | 0.45 | 5.67 | 6.63 | 328.66 |
| 1700.00 | 2.30 | 337.50 | 8.91 | -4.90 | 1699.82 | 0.55 | 8.91 | 10.17 | 331.18 |
| 1800.00 | 2.84 | 343.57 | 13.14 | -6.37 | 1799.71 | 0.60 | 13.14 | 14.60 | 334.13 |
| 1900.00 | 3.48 | 337.81 | 18.32 | -8.22 | 1899.56 | 0.72 | 18.32 | 20.08 | 335.84 |
| 2000.00 | 4.05 | 337.57 | 24.39 | -10.71 | 1999.35 | 0.57 | 24.39 | 26.64 | 336.30 |
| 2100.00 | 4.52 | 339.86 | 31.35 | -13.41 | 2099.07 | 0.50 | 31.35 | 34.10 | 336.84 |
| 2200.00 | 4.55 | 344.02 | 38.86 | -15.86 | 2198.75 | 0.33 | 38.86 | 41.97 | 337.80 |
| 2300.00 | 5.01 | 344.49 | 46.88 | -18.12 | 2298.41 | 0.46 | 46.88 | 50.26 | 338.87 |
| 2400.00 | 4.90 | 339.93 | 55.09 | -20.75 | 2398.03 | 0.41 | 55.09 | 58.87 | 339.36 |
| 2500.00 | 5.11 | 339.48 | 63.27 | -23.78 | 2497.65 | 0.21 | 63.27 | 67.59 | 339.40 |
| 2600.00 | 4.53 | 347.15 | 71.29 | -26.22 | 2597.30 | 0.86 | 71.29 | 75.96 | 339.81 |
| 2700.00 | 4.56 | 352.00 | 79.08 | -27.65 | 2696.99 | 0.39 | 79.08 | 83.77 | 340.73 |
| 2800.00 | 3.91 | 358.38 | 86.43 | -28.30 | 2796.71 | 0.80 | 86.43 | 90.94 | 341.87 |
| 2900.00 | 2.98 | 352.61 | 92.41 | -28.73 | 2896.53 | 0.99 | 92.41 | 96.78 | 342.73 |
| 3000.00 | 2.56 | 336.98 | 97.05 | -29.94 | 2996.42 | 0.86 | 97.05 | 101.56 | 342.86 |
| 3100.00 | 2.81 | 337.54 | 101.37 | -31.75 | 3096.31 | 0.25 | 101.37 | 106.23 | 342.61 |
| 3200.00 | 2.30 | 334.88 | 105.45 | -33.54 | 3196.21 | 0.52 | 105.45 | 110.66 | 342.36 |
| 3300.00 | 1.96 | 324.70 | 108.66 | -35.37 | 3296.14 | 0.51 | 108.66 | 114.28 | 341.97 |
| 3400.00 | 1.26 | 328.49 | 111.00 | -36.94 | 3396.10 | 0.70 | 111.00 | 116.98 | 341.59 |
| 3500.00 | 1.10 | 318.30 | 112.65 | -38.15 | 3496.08 | 0.26 | 112.65 | 118.93 | 341.29 |
| 3600.00 | 1.33 | 309.97 | 114.11 | -39.68 | 3596.05 | 0.29 | 114.11 | 120.82 | 340.83 |
| 3700.00 | 1.23 | 296.16 | 115.33 | -41.53 | 3696.03 | 0.32 | 115.33 | 122.58 | 340.20 |
| 3800.00 | 0.96 | 294.84 | 116.16 | -43.26 | 3796.01 | 0.27 | 116.16 | 123.95 | 339.57 |
| 3900.00 | 1.04 | 295.23 | 116.90 | -44.84 | 3895.99 | 0.08 | 116.90 | 125.20 | 339.01 |
| 4000.00 | 1.01 | 301.88 | 117.75 | -46.41 | 3995.98 | 0.12 | 117.75 | 126.56 | 338.49 |
| 4100.00 | 0.81 | 310.55 | 118.67 | -47.69 | 4095.97 | 0.24 | 118.67 | 127.90 | 338.11 |
| 4200.00 | 0.62 | 272.64 | 119.16 | -48.77 | 4195.96 | 0.50 | 119.16 | 128.75 | 337.74 |
| 4300.00 | 0.55 | 296.19 | 119.39 | -49.74 | 4295.95 | 0.25 | 119.39 | 129.34 | 337.38 |
| 4400.00 | 1.30 | 302.34 | 120.21 | -51.13 | 4395.94 | 0.76 | 120.21 | 130.63 | 336.96 |
| 4500.00 | 0.59 | 291.65 | 121.01 | -52.57 | 4495.93 | 0.73 | 121.01 | 131.94 | 336.52 |
| 4600.00 | 1.06 | 319.85 | 121.91 | -53.65 | 4595.92 | 0.61 | 121.91 | 133.19 | 336.25 |
| 4700.00 | 0.58 | 278.92 | 122.70 | -54.75 | 4695.91 | 0.73 | 122.70 | 134.36 | 335.95 |
| 4800.00 | 0.48 | 258.71 | 122.69 | -55.67 | 4795.90 | 0.21 | 122.69 | 134.73 | 335.60 |
| 4900.00 | 0.24 | 277.69 | 122.64 | -56.28 | 4895.90 | 0.27 | 122.64 | 134.94 | 335.35 |
| 5000.00 | 0.37 | 313.66 | 122.89 | -56.72 | 4995.90 | 0.22 | 122.89 | 135.35 | 335.22 |
| 5100.00 | 0.59 | 224.93 | 122.75 | -57.31 | 5095.90 | 0.68 | 122.75 | 135.47 | 334.97 |
| 5200.00 | 0.46 | 215.11 | 122.05 | -57.91 | 5195.89 | 0.15 | 122.05 | 135.09 | 334.62 |
| 5300.00 | 0.60 | 139.39 | 121.33 | -57.80 | 5295.89 | 0.66 | 121.33 | 134.39 | 334.53 |
| 5400.00 | 0.61 | 192.83 | 120.41 | -57.58 | 5395.88 | 0.54 | 120.41 | 133.47 | 334.44 |
| 5500.00 | 0.17 | 123.58 | 119.81 | -57.57 | 5495.88 | 0.57 | 119.81 | 132.93 | 334.33 |
| 5600.00 | 0.31 | 203.25 | 119.48 | -57.56 | 5595.88 | 0.33 | 119.48 | 132.62 | 334.28 |
| 5700.00 | 0.17 | 203.27 | 119.09 | -57.72 | 5695.88 | 0.14 | 119.09 | 132.34 | 334.14 |
| 5800.00 | 0.34 | 208.95 | 118.69 | -57.93 | 5795.88 | 0.17 | 118.69 | 132.07 | 333.99 |
| 5900.00 | 0.28 | 215.48 | 118.23 | -58.21 | 5895.88 | 0.07 | 118.23 | 131.79 | 333.79 |
| 6000.00 | 0.31 | 185.80 | 117.76 | -58.39 | 5995.88 | 0.16 | 117.76 | 131.44 | 333.63 |
| 6100.00 | 0.34 | 220.96 | 117.26 | -58.61 | 6095.87 | 0.20 | 117.26 | 131.09 | 333.44 |
| 6200.00 | 0.86 | 252.04 | 116.80 | -59.52 | 6195.87 | 0.59 | 116.80 | 131.09 | 333.00 |
| 6300.00 | 1.22 | 214.53 | 115.69 | -60.84 | 6295.85 | 0.75 | 115.69 | 130.71 | 332.26 |
| 6400.00 | 0.90 | 255.22 | 114.61 | -62.20 | 6395.84 | 0.80 | 114.61 | 130.40 | 331.51 |
| 6500.00 | 1.01 | 240.33 | 113.97 | -63.73 | 6495.82 | 0.27 | 113.97 | 130.58 | 330.79 |
| 6600.00 | 1.04 | 253.32 | 113.28 | -65.37 | 6595.81 | 0.23 | 113.28 | 130.78 | 330.01 |
| 6700.00 | 1.57 | 276.05 | 113.16 | -67.61 | 6695.78 | 0.73 | 113.16 | 131.82 | 329.14 |

| | | | | | | | | | |
|---------|------|--------|--------|--------|---------|------|--------|--------|--------|
| 6800.00 | 1.20 | 282.83 | 113.54 | -69.99 | 6795.75 | 0.41 | 113.54 | 133.37 | 328.35 |
| 6900.00 | 1.08 | 262.50 | 113.64 | -71.94 | 6895.73 | 0.42 | 113.64 | 134.50 | 327.66 |
| 7000.00 | 1.67 | 277.84 | 113.72 | -74.32 | 6995.70 | 0.69 | 113.72 | 135.85 | 326.83 |
| 7100.00 | 1.19 | 288.36 | 114.24 | -76.74 | 7095.67 | 0.55 | 114.24 | 137.63 | 326.11 |
| 7200.00 | 1.94 | 297.50 | 115.35 | -79.23 | 7195.64 | 0.79 | 115.35 | 139.94 | 325.52 |
| 7300.00 | 1.62 | 318.93 | 117.20 | -81.66 | 7295.59 | 0.73 | 117.20 | 142.84 | 325.13 |
| 7400.00 | 1.68 | 350.85 | 119.71 | -82.82 | 7395.55 | 0.91 | 119.71 | 145.57 | 325.32 |