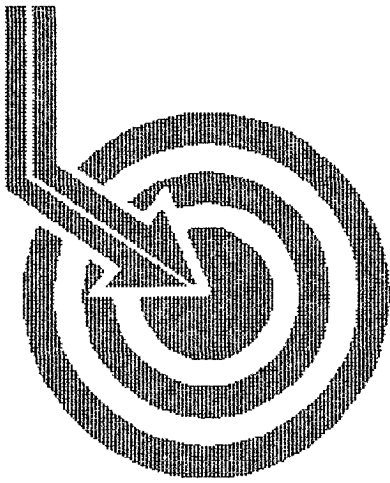
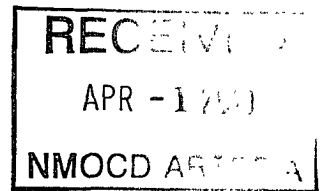




# Scientific Drilling



## COG RESOURCES

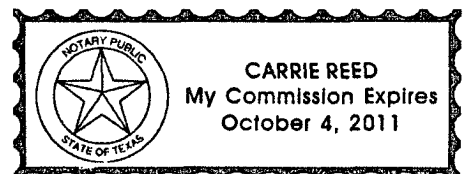
Field: Loco Hills Paddock  
Site: Eddy County, NM  
Well: Electra Federal #2  
Wellpath: VH - Job #32K0210129  
Survey: 02/26/10

This survey is correct to the best of my knowledge and is supported by actual field data.

*Robert*  
Company Representative

Notarized this date 11th of March, 2010.

*Carrie Reed*  
Notary Signature  
County of Midland  
State of Texas





# Scientific Drilling International, Inc.

## Survey Report

|                                       |                                   |                                          |                   |
|---------------------------------------|-----------------------------------|------------------------------------------|-------------------|
| <b>Company:</b> COG RESOURCES         | <b>Date:</b> 3/4/2010             | <b>Time:</b> 14:36:51                    | <b>Page:</b> 1    |
| <b>Field:</b> Loco Hills Paddock      | <b>Co-ordinate(NE) Reference:</b> | <b>Site:</b> Eddy County, NM, True North |                   |
| <b>Site:</b> Eddy County, NM          | <b>Vertical (TVD) Reference:</b>  | <b>SITE:</b> 0.0                         |                   |
| <b>Well:</b> Electra Federal #2       | <b>Section (VS) Reference:</b>    | <b>Well:</b> (0.00N,0.00E,308.92Azi)     |                   |
| <b>Wellpath:</b> VH - Job #32K0210129 | <b>Survey Calculation Method:</b> | <b>Minimum Curvature</b>                 | <b>Db:</b> Sybase |

|                                                |                                       |
|------------------------------------------------|---------------------------------------|
| <b>Survey:</b> 02/26/10                        | <b>Start Date:</b> 2/26/2010          |
| <b>KSRG 0'-5974'</b>                           |                                       |
| <b>Company:</b> Scientific Drilling Internatio | <b>Engineer:</b> Madrid w/Halliburton |
| <b>Tool:</b> Keeper, Keeper Gyro               | <b>Tied-to:</b> From Surface          |

### Survey

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | VS<br>ft | N/S<br>ft | E/W<br>ft | DLS<br>deg/100ft | ClsD<br>ft | ClsA<br>deg |
|----------|-------------|-------------|-----------|----------|-----------|-----------|------------------|------------|-------------|
| 0.0      | 0.00        | 0.00        | 0.0       | 0.0      | 0.0       | 0.0       | 0.00             | 0.0        | 0.00        |
| 100.0    | 0.05        | 274.53      | 100.0     | 0.0      | 0.0       | 0.0       | 0.05             | 0.0        | 274.53      |
| 200.0    | 0.67        | 49.97       | 200.0     | 0.0      | 0.4       | 0.4       | 0.71             | 0.5        | 43.29       |
| 300.0    | 0.19        | 338.25      | 300.0     | 0.0      | 0.9       | 0.7       | 0.64             | 1.2        | 39.29       |
| 400.0    | 0.18        | 254.38      | 400.0     | 0.2      | 1.0       | 0.5       | 0.25             | 1.2        | 27.53       |
| 500.0    | 0.29        | 257.80      | 500.0     | 0.5      | 0.9       | 0.1       | 0.11             | 0.9        | 8.30        |
| 600.0    | 0.41        | 223.27      | 600.0     | 0.7      | 0.6       | -0.4      | 0.24             | 0.7        | 329.86      |
| 700.0    | 0.39        | 210.55      | 700.0     | 0.6      | 0.1       | -0.8      | 0.09             | 0.8        | 274.52      |
| 800.0    | 0.68        | 103.00      | 800.0     | 0.1      | -0.4      | -0.4      | 0.88             | 0.5        | 225.37      |
| 900.0    | 1.03        | 82.96       | 900.0     | -1.1     | -0.4      | 1.1       | 0.46             | 1.2        | 109.45      |
| 1000.0   | 1.23        | 81.39       | 1000.0    | -2.4     | -0.1      | 3.1       | 0.20             | 3.1        | 92.21       |
| 1100.0   | 0.95        | 72.76       | 1099.9    | -3.6     | 0.3       | 4.9       | 0.32             | 4.9        | 86.63       |
| 1200.0   | 0.92        | 62.68       | 1199.9    | -4.4     | 0.9       | 6.4       | 0.17             | 6.5        | 81.98       |
| 1300.0   | 0.86        | 70.98       | 1299.9    | -5.1     | 1.5       | 7.8       | 0.14             | 8.0        | 79.05       |
| 1400.0   | 0.57        | 80.95       | 1399.9    | -5.9     | 1.8       | 9.0       | 0.31             | 9.2        | 78.50       |
| 1500.0   | 0.40        | 89.53       | 1499.9    | -6.5     | 1.9       | 9.9       | 0.18             | 10.1       | 79.00       |
| 1600.0   | 0.30        | 91.01       | 1599.9    | -7.0     | 1.9       | 10.5      | 0.10             | 10.7       | 79.63       |
| 1700.0   | 0.09        | 28.23       | 1699.9    | -7.1     | 2.0       | 10.8      | 0.27             | 11.0       | 79.58       |
| 1800.0   | 0.27        | 304.65      | 1799.9    | -6.9     | 2.2       | 10.6      | 0.27             | 10.9       | 78.38       |
| 1900.0   | 0.36        | 297.81      | 1899.9    | -6.4     | 2.5       | 10.2      | 0.10             | 10.5       | 76.35       |
| 2000.0   | 0.59        | 297.75      | 1999.9    | -5.5     | 2.9       | 9.4       | 0.23             | 9.8        | 73.16       |
| 2100.0   | 0.60        | 294.34      | 2099.9    | -4.5     | 3.3       | 8.5       | 0.04             | 9.1        | 68.71       |
| 2200.0   | 0.86        | 279.71      | 2199.9    | -3.4     | 3.7       | 7.3       | 0.32             | 8.1        | 63.35       |
| 2300.0   | 0.90        | 282.32      | 2299.9    | -2.0     | 3.9       | 5.8       | 0.06             | 7.0        | 55.63       |
| 2400.0   | 0.95        | 284.14      | 2399.9    | -0.6     | 4.3       | 4.2       | 0.06             | 6.0        | 44.20       |
| 2500.0   | 1.02        | 283.66      | 2499.8    | 1.0      | 4.7       | 2.5       | 0.07             | 5.4        | 28.12       |
| 2600.0   | 0.94        | 283.40      | 2599.8    | 2.5      | 5.1       | 0.9       | 0.08             | 5.2        | 9.56        |
| 2700.0   | 0.97        | 283.03      | 2699.8    | 4.1      | 5.5       | -0.8      | 0.03             | 5.6        | 352.16      |
| 2800.0   | 0.95        | 286.05      | 2799.8    | 5.6      | 5.9       | -2.4      | 0.05             | 6.4        | 338.13      |
| 2900.0   | 0.95        | 284.42      | 2899.8    | 7.1      | 6.4       | -4.0      | 0.03             | 7.5        | 327.98      |
| 3000.0   | 1.09        | 290.40      | 2999.8    | 8.8      | 6.9       | -5.7      | 0.18             | 8.9        | 320.58      |
| 3100.0   | 1.01        | 295.61      | 3099.8    | 10.5     | 7.6       | -7.4      | 0.12             | 10.6       | 315.97      |
| 3200.0   | 0.82        | 302.71      | 3199.7    | 12.1     | 8.4       | -8.8      | 0.22             | 12.1       | 313.75      |
| 3300.0   | 0.86        | 302.30      | 3299.7    | 13.5     | 9.2       | -10.0     | 0.04             | 13.6       | 312.54      |
| 3400.0   | 0.94        | 305.47      | 3399.7    | 15.1     | 10.0      | -11.3     | 0.09             | 15.1       | 311.65      |
| 3500.0   | 0.71        | 296.32      | 3499.7    | 16.5     | 10.8      | -12.5     | 0.26             | 16.5       | 310.78      |
| 3600.0   | 0.63        | 297.94      | 3599.7    | 17.7     | 11.3      | -13.6     | 0.08             | 17.7       | 309.88      |
| 3700.0   | 0.59        | 294.79      | 3699.7    | 18.7     | 11.8      | -14.5     | 0.05             | 18.7       | 309.12      |
| 3800.0   | 0.62        | 295.92      | 3799.7    | 19.7     | 12.3      | -15.5     | 0.03             | 19.7       | 308.39      |
| 3900.0   | 0.60        | 301.68      | 3899.7    | 20.8     | 12.8      | -16.4     | 0.06             | 20.8       | 307.90      |
| 4000.0   | 0.61        | 296.87      | 3999.7    | 21.8     | 13.3      | -17.3     | 0.05             | 21.8       | 307.48      |
| 4100.0   | 0.64        | 294.75      | 4099.7    | 22.9     | 13.8      | -18.3     | 0.04             | 22.9       | 306.93      |
| 4200.0   | 0.57        | 283.94      | 4199.7    | 23.9     | 14.1      | -19.3     | 0.13             | 23.9       | 306.18      |
| 4300.0   | 0.42        | 293.73      | 4299.7    | 24.7     | 14.4      | -20.1     | 0.17             | 24.7       | 305.56      |
| 4400.0   | 0.64        | 325.56      | 4399.7    | 25.6     | 15.0      | -20.8     | 0.36             | 25.6       | 305.82      |
| 4500.0   | 0.89        | 327.75      | 4499.6    | 26.8     | 16.1      | -21.5     | 0.25             | 26.9       | 306.84      |
| 4600.0   | 0.77        | 309.57      | 4599.6    | 28.2     | 17.2      | -22.4     | 0.29             | 28.3       | 307.47      |
| 4700.0   | 0.75        | 309.81      | 4699.6    | 29.6     | 18.0      | -23.4     | 0.02             | 29.6       | 307.57      |
| 4800.0   | 0.83        | 320.13      | 4799.6    | 30.9     | 19.0      | -24.4     | 0.16             | 30.9       | 307.91      |



# Scientific Drilling International, Inc.

## Survey Report

Company: COG RESOURCES Date: 3/4/2010 Time: 14:36:51 Page: 2  
Field: Loco Hills Paddock Co-ordinate(NE) Reference: Site: Eddy County, NM, True North  
Site: Eddy County, NM Vertical (TVD) Reference: SITE 0.0  
Well: Electra Federal #2 Section (VS) Reference: Well (0.00N,0.00E,308.92Azi)  
Wellpath: VH - Job #32K0210129 Survey Calculation Method: Minimum Curvature Db: Sybase

### Survey

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | VS<br>ft | N/S<br>ft | E/W<br>ft | DLS<br>deg/100ft | ClsD<br>ft | ClsA<br>deg |
|----------|-------------|-------------|-----------|----------|-----------|-----------|------------------|------------|-------------|
| 4900.0   | 0.76        | 320.39      | 4899.6    | 32.3     | 20.1      | -25.3     | 0.07             | 32.3       | 308.44      |
| 5000.0   | 0.78        | 320.85      | 4999.6    | 33.6     | 21.1      | -26.2     | 0.02             | 33.6       | 308.92      |
| 5100.0   | 0.69        | 318.08      | 5099.6    | 34.9     | 22.1      | -27.0     | 0.10             | 34.9       | 309.31      |
| 5200.0   | 0.70        | 307.86      | 5199.6    | 36.1     | 22.9      | -27.9     | 0.12             | 36.1       | 309.43      |
| 5300.0   | 0.49        | 332.12      | 5299.6    | 37.1     | 23.7      | -28.6     | 0.32             | 37.1       | 309.66      |
| 5400.0   | 0.53        | 320.37      | 5399.6    | 37.9     | 24.4      | -29.0     | 0.11             | 37.9       | 310.03      |
| 5500.0   | 0.25        | 286.82      | 5499.6    | 38.6     | 24.8      | -29.5     | 0.35             | 38.6       | 310.03      |
| 5600.0   | 0.34        | 264.43      | 5599.6    | 39.0     | 24.9      | -30.1     | 0.14             | 39.0       | 309.59      |
| 5700.0   | 0.11        | 278.26      | 5699.6    | 39.3     | 24.8      | -30.4     | 0.23             | 39.3       | 309.21      |
| 5800.0   | 0.16        | 192.61      | 5799.6    | 39.3     | 24.7      | -30.6     | 0.19             | 39.3       | 308.96      |
| 5900.0   | 0.06        | 287.33      | 5899.6    | 39.3     | 24.6      | -30.6     | 0.18             | 39.3       | 308.75      |
| 5974.0   | 0.21        | 35.60       | 5973.6    | 39.3     | 24.7      | -30.6     | 0.32             | 39.3       | 308.92      |