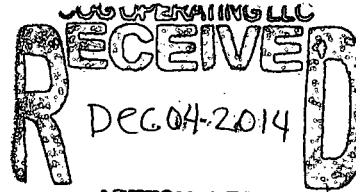


**McVAY DRILLING COMPANY**

P.O. Box 2450  
 Hobbs, New Mexico 88241  
 (575) 397-3311  
 FAX: 39-DRILL

30-025-41737



HOBBSOCD

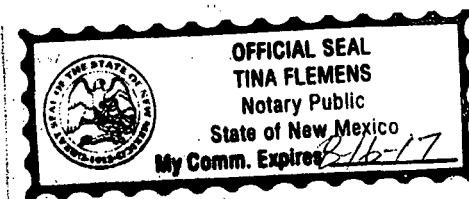
MAR 02 2015

RECEIVED

Well Name and Num: Scooter Fed Com #1H  
 Location: Sec 23, T18S, R33E  
 Operator: COG  
 Drilling Contractor: McVay Drilling Company

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

| <u>Degrees @</u> | <u>Depth</u> | <u>Degrees @</u> | <u>Depth</u> | <u>Degrees @</u> | <u>Depth</u> |
|------------------|--------------|------------------|--------------|------------------|--------------|
| 0.50             | 232          | 0.80             | 7598         | 87.40            | 12790        |
| 0.40             | 525          | 0.30             | 7851         | 89.80            | 13085        |
| 0.80             | 837          | 1.00             | 8170         | 91.10            | 13461        |
| 0.20             | 1152         | 1.80             | 8419         | 89.80            | 13840        |
| 0.70             | 1571         | 1.20             | 8493         | 90.00            | 14094        |
| 0.70             | 1891         | 1.80             | 8875         |                  |              |
| 0.70             | 2237         | 10.50            | 9099         |                  |              |
| 1.40             | 2741         | 35.60            | 9259         |                  |              |
| 1.50             | 3036         | 50.60            | 9418         |                  |              |
| 1.10             | 3208         | 67.40            | 9705         |                  |              |
| 1.70             | 3681         | 76.80            | 9820         |                  |              |
| 1.60             | 4154         | 80.50            | 9916         |                  |              |
| 1.00             | 4626         | 89.10            | 10426        |                  |              |
| 0.80             | 5099         | 88.00            | 10807        |                  |              |
| 0.80             | 5571         | 87.80            | 11278        |                  |              |
| 1.00             | 6043         | 85.80            | 11656        |                  |              |
| 1.40             | 6520         | 90.20            | 12127        |                  |              |
| 1.40             | 7091         | 88.40            | 12317        |                  |              |

By: Mario A. Baez Jr.Subscribed and sworn to before me this 2nd day of December, 2014Tina Flemens  
Notary Public, Lea County, New Mexico

APR 08 2015



December 2, 2014

MAR 02 2015

RECEIVED

Concho Resources, Inc.  
One Concho Center  
600 W. Illinois Avenue  
Midland, Texas 79701

Attn: Kanicia Castillo

RE: **Scooter Federal Com 1H**

30-025-41737

Please find enclosed a copy of the survey from 0.00' to 8424.00' ran on the above referenced well.

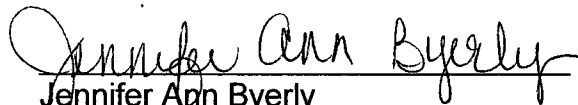
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

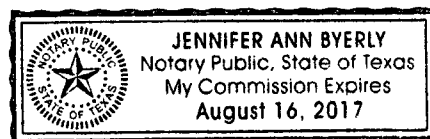
Sincerely,

Keith Havelka  
Operations

STATE OF TEXAS     §  
                                  §  
COUNTY OF NUECES §

This instrument was acknowledged before me on the 2 day of December A.D., 2014, by Keith Havelka.

  
Jennifer Ann Byerly  
Notary Public, State of Texas





Company: COG Operating  
Lease/Well: Scooter Federal Com/1H

Rig Name: McVay 7  
State/County: New Mexico/Lea  
Latitude: 32.740, Longitude: -103.640  
GRID North is 0.370 Degrees East of True North  
VS-Azi: 0.000 Degrees



Depth Reference : RKB = 17 Ft

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: scooter fed com 1h\_survey.ut

Minimum Curvature Method

Report Date/Time: 12/2/2014 / 13:22

VES Survey International

Midland Tx

(432) 563-5444

Surveyor: Gene Heiss

Scooter Federal Com 1H / API 30-025-41737

RECEIVED  
MAR 02 2015  
HOBBSOCD

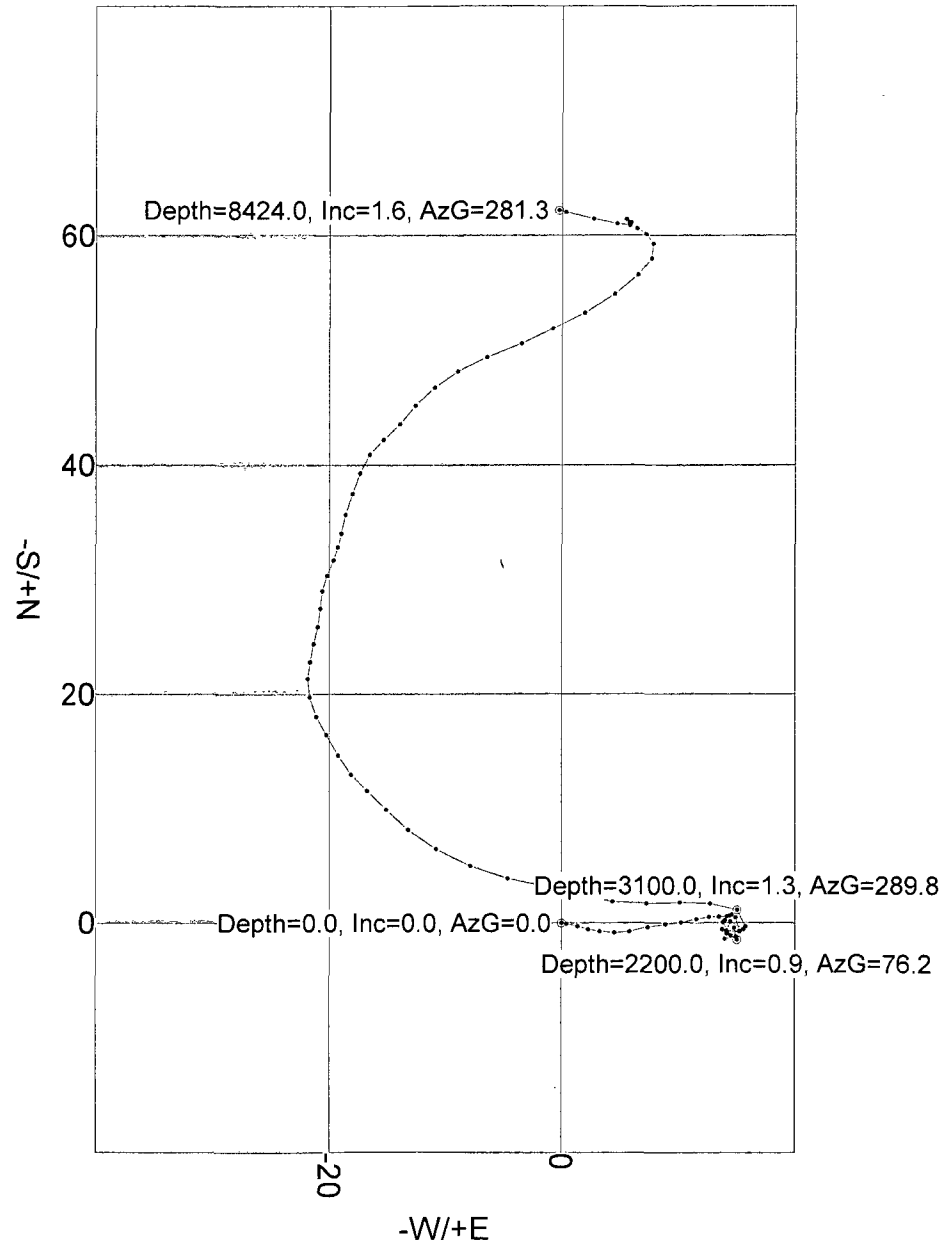
| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | TVD<br>FT | +N/-S<br>FT | +E/-W<br>FT | Vertical<br>Section<br>FT | Closure<br>Distance<br>FT | Closure<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|-----------|-------------|-------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 0.000                   | 0.000                | 0.000                     | 0.000     | 0.000       | 0.000       | 0.000                     | 0.000                     | 0.000                       | ****                          |
| 100.000                 | 0.505                | 101.713                   | 99.999    | -0.089      | 0.431       | -0.089                    | 0.440                     | 101.713                     | 0.505                         |
| 200.000                 | 0.636                | 103.921                   | 199.994   | -0.312      | 1.401       | -0.312                    | 1.435                     | 102.566                     | 0.133                         |
| 300.000                 | 0.420                | 109.796                   | 299.989   | -0.570      | 2.284       | -0.570                    | 2.354                     | 104.009                     | 0.222                         |
| 400.000                 | 0.738                | 95.493                    | 399.984   | -0.756      | 3.270       | -0.756                    | 3.356                     | 103.011                     | 0.347                         |
| 500.000                 | 0.689                | 94.460                    | 499.976   | -0.864      | 4.511       | -0.864                    | 4.593                     | 100.844                     | 0.051                         |
| 600.000                 | 0.816                | 78.908                    | 599.968   | -0.774      | 5.808       | -0.774                    | 5.859                     | 97.589                      | 0.239                         |
| 700.000                 | 1.035                | 73.763                    | 699.955   | -0.384      | 7.374       | -0.384                    | 7.384                     | 92.984                      | 0.235                         |
| 800.000                 | 0.731                | 89.848                    | 799.943   | -0.130      | 8.879       | -0.130                    | 8.880                     | 90.839                      | 0.390                         |
| 900.000                 | 0.838                | 78.904                    | 899.934   | 0.012       | 10.234      | 0.012                     | 10.234                    | 89.931                      | 0.184                         |
| 1000.000                | 0.711                | 75.735                    | 999.925   | 0.306       | 11.553      | 0.306                     | 11.557                    | 88.483                      | 0.134                         |
| 1100.000                | 0.558                | 85.465                    | 1099.918  | 0.497       | 12.639      | 0.497                     | 12.649                    | 87.747                      | 0.186                         |
| 1200.000                | 0.429                | 93.478                    | 1199.915  | 0.513       | 13.499      | 0.513                     | 13.509                    | 87.824                      | 0.146                         |
| 1300.000                | 0.358                | 75.665                    | 1299.912  | 0.568       | 14.176      | 0.568                     | 14.187                    | 87.707                      | 0.141                         |
| 1400.000                | 0.142                | 67.465                    | 1399.911  | 0.692       | 14.592      | 0.692                     | 14.609                    | 87.283                      | 0.219                         |
| 1500.000                | 0.367                | 245.002                   | 1499.911  | 0.604       | 14.416      | 0.604                     | 14.429                    | 87.600                      | 0.509                         |
| 1600.000                | 0.338                | 203.368                   | 1599.909  | 0.198       | 14.009      | 0.198                     | 14.010                    | 89.191                      | 0.252                         |
| 1700.000                | 0.610                | 195.466                   | 1699.906  | -0.586      | 13.749      | -0.586                    | 13.762                    | 92.441                      | 0.278                         |
| 1800.000                | 0.568                | 131.765                   | 1799.901  | -1.429      | 13.977      | -1.429                    | 14.050                    | 95.837                      | 0.622                         |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | TVD<br>FT | +N/-S<br>FT | +E/-W<br>FT | Vertical<br>Section<br>FT | Closure<br>Distance<br>FT | Closure<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|-----------|-------------|-------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 1900.000                | 0.885                | 48.226                    | 1899.895  | -1.244      | 14.922      | -1.244                    | 14.974                    | 94.767                      | 0.996                         |
| 2000.000                | 0.864                | 289.766                   | 1999.889  | -0.475      | 14.788      | -0.475                    | 14.796                    | 91.840                      | 1.503                         |
| 2100.000                | 0.853                | 174.352                   | 2099.884  | -0.961      | 14.152      | -0.961                    | 14.184                    | 93.884                      | 1.451                         |
| 2200.000                | 0.938                | 76.242                    | 2199.876  | -1.507      | 15.020      | -1.507                    | 15.095                    | 95.729                      | 1.354                         |
| 2300.000                | 0.889                | 342.966                   | 2299.868  | -0.570      | 15.588      | -0.570                    | 15.598                    | 92.095                      | 1.329                         |
| 2400.000                | 1.008                | 264.459                   | 2399.858  | 0.087       | 14.485      | 0.087                     | 14.485                    | 89.657                      | 1.204                         |
| 2500.000                | 1.016                | 143.834                   | 2499.850  | -0.714      | 14.132      | -0.714                    | 14.150                    | 92.891                      | 1.758                         |
| 2600.000                | 1.009                | 40.986                    | 2599.841  | -0.764      | 15.232      | -0.764                    | 15.252                    | 92.872                      | 1.583                         |
| 2700.000                | 1.195                | 301.953                   | 2699.829  | 0.453       | 14.925      | 0.453                     | 14.932                    | 88.263                      | 1.681                         |
| 2800.000                | 1.145                | 192.546                   | 2799.818  | 0.029       | 13.823      | 0.029                     | 13.824                    | 89.881                      | 1.910                         |
| 2900.000                | 1.060                | 102.879                   | 2899.805  | -1.153      | 14.509      | -1.153                    | 14.554                    | 94.545                      | 1.556                         |
| 3000.000                | 1.256                | 19.513                    | 2999.791  | -0.327      | 15.777      | -0.327                    | 15.780                    | 91.186                      | 1.547                         |
| 3100.000                | 1.333                | 289.812                   | 3099.774  | 1.100       | 15.049      | 1.100                     | 15.089                    | 85.818                      | 1.826                         |
| 3200.000                | 1.422                | 278.369                   | 3199.745  | 1.675       | 12.727      | 1.675                     | 12.837                    | 82.501                      | 0.289                         |
| 3300.000                | 1.586                | 266.171                   | 3299.711  | 1.763       | 10.119      | 1.763                     | 10.271                    | 80.114                      | 0.359                         |
| 3400.000                | 1.703                | 271.461                   | 3399.670  | 1.709       | 7.253       | 1.709                     | 7.452                     | 76.742                      | 0.192                         |
| 3500.000                | 1.604                | 274.379                   | 3499.628  | 1.854       | 4.372       | 1.854                     | 4.749                     | 67.026                      | 0.130                         |
| 3600.000                | 1.548                | 288.676                   | 3599.591  | 2.393       | 1.697       | 2.393                     | 2.934                     | 35.341                      | 0.396                         |
| 3700.000                | 1.970                | 281.294                   | 3699.543  | 3.162       | -1.268      | 3.162                     | 3.407                     | 338.149                     | 0.477                         |
| 3800.000                | 1.973                | 283.438                   | 3799.484  | 3.899       | -4.627      | 3.899                     | 6.051                     | 310.116                     | 0.074                         |
| 3900.000                | 1.933                | 293.288                   | 3899.426  | 4.966       | -7.851      | 4.966                     | 9.289                     | 302.314                     | 0.338                         |
| 4000.000                | 1.853                | 300.389                   | 3999.372  | 6.450       | -10.795     | 6.450                     | 12.575                    | 300.860                     | 0.248                         |
| 4100.000                | 1.538                | 310.582                   | 4099.328  | 8.141       | -13.208     | 8.141                     | 15.516                    | 301.648                     | 0.435                         |
| 4200.000                | 1.435                | 315.503                   | 4199.295  | 9.907       | -15.105     | 9.907                     | 18.064                    | 303.260                     | 0.164                         |
| 4300.000                | 1.229                | 314.151                   | 4299.268  | 11.548      | -16.752     | 11.548                    | 20.347                    | 304.579                     | 0.208                         |
| 4400.000                | 1.049                | 317.876                   | 4399.248  | 12.974      | -18.136     | 12.974                    | 22.299                    | 305.578                     | 0.195                         |
| 4500.000                | 1.292                | 333.796                   | 4499.227  | 14.664      | -19.248     | 14.664                    | 24.198                    | 307.303                     | 0.404                         |
| 4600.000                | 1.080                | 325.984                   | 4599.206  | 16.457      | -20.273     | 16.457                    | 26.112                    | 309.069                     | 0.266                         |
| 4700.000                | 0.971                | 338.716                   | 4699.190  | 18.028      | -21.108     | 18.028                    | 27.759                    | 310.500                     | 0.252                         |
| 4800.000                | 1.099                | 343.379                   | 4799.173  | 19.736      | -21.690     | 19.736                    | 29.325                    | 312.300                     | 0.153                         |
| 4900.000                | 0.789                | 9.779                     | 4899.160  | 21.333      | -21.847     | 21.333                    | 30.535                    | 314.318                     | 0.526                         |
| 5000.000                | 0.918                | 6.009                     | 4999.149  | 22.809      | -21.646     | 22.809                    | 31.445                    | 316.498                     | 0.141                         |
| 5100.000                | 0.933                | 16.822                    | 5099.136  | 24.385      | -21.327     | 24.385                    | 32.395                    | 318.828                     | 0.175                         |
| 5200.000                | 0.821                | 8.035                     | 5199.124  | 25.874      | -20.991     | 25.874                    | 33.318                    | 320.949                     | 0.175                         |
| 5300.000                | 1.025                | 8.667                     | 5299.111  | 27.468      | -20.756     | 27.468                    | 34.428                    | 322.924                     | 0.204                         |
| 5400.000                | 0.743                | 1.799                     | 5399.099  | 29.000      | -20.601     | 29.000                    | 35.572                    | 324.611                     | 0.301                         |
| 5500.000                | 0.899                | 29.870                    | 5499.090  | 30.328      | -20.189     | 30.328                    | 36.434                    | 326.348                     | 0.426                         |
| 5600.000                | 0.787                | 14.599                    | 5599.079  | 31.673      | -19.625     | 31.673                    | 37.261                    | 328.217                     | 0.250                         |
| 5700.000                | 0.599                | 21.560                    | 5699.071  | 32.824      | -19.260     | 32.824                    | 38.058                    | 329.597                     | 0.205                         |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | TVD<br>FT | +N/-S<br>FT | +E/-W<br>FT | Vertical<br>Section<br>FT | Closure<br>Distance<br>FT | Closure<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|-----------|-------------|-------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 5800.000                | 0.810                | 4.553                     | 5799.064  | 34.015      | -19.012     | 34.015                    | 38.968                    | 330.798                     | 0.295                         |
| 5900.000                | 1.143                | 18.994                    | 5899.049  | 35.663      | -18.631     | 35.663                    | 40.237                    | 332.417                     | 0.412                         |
| 6000.000                | 1.042                | 17.947                    | 5999.031  | 37.472      | -18.026     | 37.472                    | 41.582                    | 334.310                     | 0.103                         |
| 6100.000                | 1.146                | 20.436                    | 6099.013  | 39.274      | -17.397     | 39.274                    | 42.955                    | 336.109                     | 0.113                         |
| 6200.000                | 0.965                | 34.485                    | 6198.996  | 40.905      | -16.571     | 40.905                    | 44.134                    | 337.947                     | 0.314                         |
| 6300.000                | 1.075                | 52.089                    | 6298.981  | 42.176      | -15.354     | 42.176                    | 44.884                    | 339.996                     | 0.331                         |
| 6400.000                | 1.207                | 40.548                    | 6398.961  | 43.552      | -13.929     | 43.552                    | 45.726                    | 342.265                     | 0.264                         |
| 6500.000                | 1.201                | 38.265                    | 6498.939  | 45.175      | -12.596     | 45.175                    | 46.898                    | 344.421                     | 0.048                         |
| 6600.000                | 1.450                | 53.377                    | 6598.912  | 46.752      | -10.931     | 46.752                    | 48.013                    | 346.840                     | 0.427                         |
| 6700.000                | 1.342                | 56.524                    | 6698.883  | 48.153      | -8.940      | 48.153                    | 48.976                    | 349.483                     | 0.133                         |
| 6800.000                | 1.882                | 68.958                    | 6798.843  | 49.388      | -6.430      | 49.388                    | 49.805                    | 352.582                     | 0.641                         |
| 6900.000                | 1.807                | 66.919                    | 6898.791  | 50.596      | -3.447      | 50.596                    | 50.713                    | 356.103                     | 0.100                         |
| 7000.000                | 1.593                | 61.941                    | 6998.747  | 51.868      | -0.769      | 51.868                    | 51.874                    | 359.150                     | 0.260                         |
| 7100.000                | 1.890                | 64.284                    | 7098.701  | 53.237      | 1.943       | 53.237                    | 53.273                    | 2.090                       | 0.305                         |
| 7200.000                | 1.640                | 48.781                    | 7198.654  | 54.896      | 4.504       | 54.896                    | 55.080                    | 4.691                       | 0.537                         |
| 7300.000                | 1.342                | 51.592                    | 7298.620  | 56.566      | 6.498       | 56.566                    | 56.938                    | 6.553                       | 0.307                         |
| 7400.000                | 0.840                | 16.519                    | 7398.602  | 57.996      | 7.624       | 57.996                    | 58.495                    | 7.489                       | 0.813                         |
| 7500.000                | 0.664                | 354.113                   | 7498.594  | 59.275      | 7.773       | 59.275                    | 59.782                    | 7.471                       | 0.340                         |
| 7600.000                | 0.688                | 296.171                   | 7598.588  | 60.116      | 7.175       | 60.116                    | 60.542                    | 6.806                       | 0.655                         |
| 7700.000                | 0.355                | 314.353                   | 7698.584  | 60.598      | 6.414       | 60.598                    | 60.936                    | 6.042                       | 0.368                         |
| 7800.000                | 0.502                | 314.915                   | 7798.581  | 61.124      | 5.882       | 61.124                    | 61.406                    | 5.496                       | 0.147                         |
| 7900.000                | 0.072                | 244.869                   | 7898.580  | 61.406      | 5.515       | 61.406                    | 61.654                    | 5.132                       | 0.482                         |
| 8000.000                | 0.445                | 131.460                   | 7998.579  | 61.123      | 5.749       | 61.123                    | 61.393                    | 5.374                       | 0.478                         |
| 8100.000                | 0.281                | 274.189                   | 8098.578  | 60.884      | 5.796       | 60.884                    | 61.159                    | 5.438                       | 0.690                         |
| 8200.000                | 0.986                | 278.059                   | 8198.571  | 61.022      | 4.700       | 61.022                    | 61.203                    | 4.404                       | 0.706                         |
| 8300.000                | 1.383                | 284.138                   | 8298.550  | 61.437      | 2.679       | 61.437                    | 61.496                    | 2.496                       | 0.416                         |
| 8400.000                | 1.399                | 284.814                   | 8398.520  | 62.044      | 0.328       | 62.044                    | 62.045                    | 0.303                       | 0.024                         |
| 8424.000                | 1.552                | 281.266                   | 8422.512  | 62.183      | -0.274      | 62.183                    | 62.183                    | 359.747                     | 0.742                         |



VES Survey International  
Midland Tx  
(432) 563-5444  
Surveyor: Gene Heiss  
Scooter Federal Com 1H / API 30-025-41737



VES Survey Date: 11/16/2014



## **COG Operating LLC**

**Lea County, NM  
Scooter Fed Com  
#1H**

**OH**

**Survey: MWD #1**

## **Survey Report - Geographic**

**27 November, 2014**



Wellplanning  
Survey Report - Geographic

|           |                   |                              |                           |
|-----------|-------------------|------------------------------|---------------------------|
| Company:  | COG Operating LLC | Local Co-ordinate Reference: | Well #1H                  |
| Project:  | Lea County, NM    | TVD Reference:               | well1 @ 3913.5usft        |
| Site:     | Scooter Fed Com   | MD Reference:                | well1 @ 3913.5usft        |
| Well:     | #1H               | North Reference:             | Grid                      |
| Wellbore: | OH                | Survey Calculation Method:   | Minimum Curvature         |
| Design:   | OH                | Database:                    | EDM 5000.1 Single User Db |

|             |                                      |               |                |
|-------------|--------------------------------------|---------------|----------------|
| Project     | Lea County, NM                       |               |                |
| Map System: | US State Plane 1927 (Exact solution) | System Datum: | Mean Sea Level |
| Geo Datum:  | NAD 1927 (NADCON CONUS)              |               |                |
| Map Zone:   | New Mexico East 3001                 |               |                |

|                       |                 |              |                 |                   |                   |
|-----------------------|-----------------|--------------|-----------------|-------------------|-------------------|
| Site                  | Scooter Fed Com |              |                 |                   |                   |
| Site Position:        |                 | Northing:    | 633,527.40 usft | Latitude:         | 32° 44' 23.085 N  |
| From:                 | Map             | Easting:     | 713,079.00 usft | Longitude:        | 103° 38' 25.281 W |
| Position Uncertainty: | 0.0 usft        | Slot Radius: | 13-3/16 "       | Grid Convergence: | 0.37 °            |

|                      |       |          |                     |                 |               |                   |
|----------------------|-------|----------|---------------------|-----------------|---------------|-------------------|
| Well                 | #1H   |          |                     |                 |               |                   |
| Well Position        | +N/-S | 0.0 usft | Northing:           | 633,527.40 usft | Latitude:     | 32° 44' 23.085 N  |
|                      | +E/-W | 0.0 usft | Easting:            | 713,079.00 usft | Longitude:    | 103° 38' 25.281 W |
| Position Uncertainty |       | 0.0 usft | Wellhead Elevation: | usft            | Ground Level: | 3,896.5 usft      |

|           |            |             |                 |               |                     |
|-----------|------------|-------------|-----------------|---------------|---------------------|
| Wellbore  | OH         |             |                 |               |                     |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|           | IGRF2010   | 11/17/2014  | 7.23            | 60.56         | 48,572              |

|                   |                         |              |              |               |     |
|-------------------|-------------------------|--------------|--------------|---------------|-----|
| Design            | OH                      |              |              |               |     |
| Audit Notes:      |                         |              |              |               |     |
| Version:          | 1.0                     | Phase:       | ACTUAL       | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |     |
|                   | 0.0                     | 0.0          | 0.0          | 180.56        |     |

|                |                 |                   |           |                |
|----------------|-----------------|-------------------|-----------|----------------|
| Survey Program | Date 11/27/2014 |                   |           |                |
| From (usft)    | To (usft)       | Survey (Wellbore) | Tool Name | Description    |
| 100.0          | 8,424.0         | GYRO (OH)         | MWD       | MWD - Standard |
| 8,493.0        | 14,138.0        | MWD #1 (OH)       | MWD       | MWD - Standard |

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude         | Longitude         |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|-------------------|
| 8,424.0               | 1.55            | 281.27      | 8,422.5               | 62.2         | -0.3         | 633,589.59          | 713,078.72         | 32° 44' 23.700 N | 103° 38' 25.279 W |
| 8,493.0               | 1.20            | 301.70      | 8,491.5               | 62.7         | -1.8         | 633,590.15          | 713,077.19         | 32° 44' 23.706 N | 103° 38' 25.297 W |
| 8,588.0               | 1.50            | 304.20      | 8,586.5               | 64.0         | -3.7         | 633,591.37          | 713,075.32         | 32° 44' 23.718 N | 103° 38' 25.319 W |
| 8,684.0               | 1.70            | 311.70      | 8,682.4               | 65.6         | -5.8         | 633,593.02          | 713,073.22         | 32° 44' 23.735 N | 103° 38' 25.344 W |
| 8,780.0               | 1.60            | 308.90      | 8,778.4               | 67.4         | -7.9         | 633,594.81          | 713,071.11         | 32° 44' 23.753 N | 103° 38' 25.368 W |
| 8,875.0               | 1.80            | 301.40      | 8,873.3               | 69.0         | -10.2        | 633,596.42          | 713,068.80         | 32° 44' 23.769 N | 103° 38' 25.395 W |
| 8,971.0               | 1.50            | 306.10      | 8,969.3               | 70.5         | -12.5        | 633,597.95          | 713,066.50         | 32° 44' 23.784 N | 103° 38' 25.422 W |
| 9,003.0               | 1.50            | 251.70      | 9,001.3               | 70.7         | -13.2        | 633,598.06          | 713,065.77         | 32° 44' 23.785 N | 103° 38' 25.430 W |
| 9,035.0               | 5.20            | 227.30      | 9,033.2               | 69.5         | -14.7        | 633,596.95          | 713,064.30         | 32° 44' 23.774 N | 103° 38' 25.448 W |
| 9,067.0               | 7.40            | 222.50      | 9,065.0               | 67.0         | -17.2        | 633,594.45          | 713,061.84         | 32° 44' 23.750 N | 103° 38' 25.477 W |
| 9,099.0               | 10.90           | 224.90      | 9,096.6               | 63.4         | -20.7        | 633,590.78          | 713,058.31         | 32° 44' 23.714 N | 103° 38' 25.518 W |



Wellplanning  
Survey Report - Geographic

|           |                   |                              |                           |
|-----------|-------------------|------------------------------|---------------------------|
| Company:  | COG Operating LLC | Local Co-ordinate Reference: | Well #1H                  |
| Project:  | Lea County, NM    | TVD Reference:               | well1 @ 3913.5usft        |
| Site:     | Scooter Fed Com   | MD Reference:                | well1 @ 3913.5usft        |
| Well:     | #1H               | North Reference:             | Grid                      |
| Wellbore: | OH                | Survey Calculation Method:   | Minimum Curvature         |
| Design:   | OH                | Database:                    | EDM 5000.1 Single User Db |

| Survey                      |                    |                |                             |                 |                 |                           |                          |                  |                   |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|---------------------------|--------------------------|------------------|-------------------|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude         | Longitude         |
| 9,131.0                     | 15.10              | 219.50         | 9,127.8                     | 58.0            | -25.5           | 633,585.42                | 713,053.53               | 32° 44' 23.661 N | 103° 38' 25.575 W |
| 9,163.0                     | 20.30              | 217.20         | 9,158.3                     | 50.4            | -31.5           | 633,577.78                | 713,047.51               | 32° 44' 23.586 N | 103° 38' 25.646 W |
| 9,195.0                     | 25.60              | 215.10         | 9,187.7                     | 40.3            | -38.8           | 633,567.69                | 713,040.18               | 32° 44' 23.486 N | 103° 38' 25.732 W |
| 9,227.0                     | 30.60              | 211.30         | 9,216.0                     | 27.7            | -47.0           | 633,555.07                | 713,031.96               | 32° 44' 23.362 N | 103° 38' 25.829 W |
| 9,259.0                     | 35.60              | 207.60         | 9,242.8                     | 12.4            | -55.6           | 633,539.84                | 713,023.41               | 32° 44' 23.212 N | 103° 38' 25.931 W |
| 9,291.0                     | 39.30              | 202.00         | 9,268.2                     | -5.2            | -63.7           | 633,522.18                | 713,015.30               | 32° 44' 23.038 N | 103° 38' 26.027 W |
| 9,322.0                     | 43.10              | 195.40         | 9,291.5                     | -24.6           | -70.2           | 633,502.85                | 713,008.80               | 32° 44' 22.847 N | 103° 38' 26.105 W |
| 9,354.0                     | 46.30              | 188.50         | 9,314.3                     | -46.6           | -74.8           | 633,480.85                | 713,004.18               | 32° 44' 22.629 N | 103° 38' 26.160 W |
| 9,386.0                     | 49.10              | 182.30         | 9,335.8                     | -70.1           | -77.0           | 633,457.31                | 713,001.99               | 32° 44' 22.397 N | 103° 38' 26.188 W |
| 9,418.0                     | 50.60              | 177.70         | 9,356.4                     | -94.5           | -77.0           | 633,432.86                | 713,002.00               | 32° 44' 22.155 N | 103° 38' 26.190 W |
| 9,450.0                     | 50.60              | 176.80         | 9,376.8                     | -119.2          | -75.8           | 633,408.17                | 713,003.18               | 32° 44' 21.910 N | 103° 38' 26.178 W |
| 9,482.0                     | 52.30              | 175.10         | 9,396.7                     | -144.2          | -74.0           | 633,383.20                | 713,004.96               | 32° 44' 21.663 N | 103° 38' 26.159 W |
| 9,514.0                     | 55.00              | 175.10         | 9,415.7                     | -169.9          | -71.8           | 633,357.53                | 713,007.16               | 32° 44' 21.409 N | 103° 38' 26.135 W |
| 9,546.0                     | 58.50              | 176.00         | 9,433.2                     | -196.6          | -69.8           | 633,330.85                | 713,009.23               | 32° 44' 21.145 N | 103° 38' 26.113 W |
| 9,577.0                     | 60.10              | 178.20         | 9,449.0                     | -223.2          | -68.4           | 633,304.23                | 713,010.57               | 32° 44' 20.881 N | 103° 38' 26.099 W |
| 9,609.0                     | 61.10              | 177.30         | 9,464.7                     | -251.0          | -67.3           | 633,276.38                | 713,011.67               | 32° 44' 20.606 N | 103° 38' 26.088 W |
| 9,641.0                     | 62.90              | 177.80         | 9,479.8                     | -279.3          | -66.1           | 633,248.15                | 713,012.87               | 32° 44' 20.326 N | 103° 38' 26.076 W |
| 9,673.0                     | 64.00              | 177.60         | 9,494.1                     | -307.9          | -65.0           | 633,219.55                | 713,014.02               | 32° 44' 20.043 N | 103° 38' 26.065 W |
| 9,705.0                     | 67.40              | 178.90         | 9,507.2                     | -337.0          | -64.1           | 633,190.40                | 713,014.91               | 32° 44' 19.755 N | 103° 38' 26.057 W |
| 9,724.0                     | 71.00              | 179.50         | 9,514.0                     | -354.8          | -63.8           | 633,172.64                | 713,015.16               | 32° 44' 19.579 N | 103° 38' 26.055 W |
| 9,756.0                     | 74.70              | 179.00         | 9,523.4                     | -385.3          | -63.4           | 633,142.08                | 713,015.56               | 32° 44' 19.277 N | 103° 38' 26.053 W |
| 9,788.0                     | 76.40              | 178.40         | 9,531.4                     | -416.3          | -62.7           | 633,111.10                | 713,016.26               | 32° 44' 18.970 N | 103° 38' 26.047 W |
| 9,820.0                     | 76.80              | 178.40         | 9,538.8                     | -447.4          | -61.9           | 633,079.98                | 713,017.13               | 32° 44' 18.662 N | 103° 38' 26.039 W |
| 9,852.0                     | 78.70              | 178.60         | 9,545.6                     | -478.7          | -61.0           | 633,048.72                | 713,017.95               | 32° 44' 18.353 N | 103° 38' 26.032 W |
| 9,884.0                     | 80.00              | 178.70         | 9,551.5                     | -510.1          | -60.3           | 633,017.28                | 713,018.69               | 32° 44' 18.041 N | 103° 38' 26.026 W |
| 9,916.0                     | 80.50              | 178.30         | 9,556.9                     | -541.6          | -59.5           | 632,985.76                | 713,019.52               | 32° 44' 17.729 N | 103° 38' 26.019 W |
| 9,948.0                     | 80.40              | 178.40         | 9,562.2                     | -573.2          | -58.6           | 632,954.21                | 713,020.42               | 32° 44' 17.417 N | 103° 38' 26.011 W |
| 9,979.0                     | 81.40              | 178.30         | 9,567.1                     | -603.8          | -57.7           | 632,923.62                | 713,021.31               | 32° 44' 17.115 N | 103° 38' 26.003 W |
| 10,011.0                    | 82.10              | 179.70         | 9,571.7                     | -635.5          | -57.1           | 632,891.95                | 713,021.86               | 32° 44' 16.801 N | 103° 38' 25.999 W |
| 10,043.0                    | 83.30              | 180.20         | 9,575.8                     | -667.2          | -57.1           | 632,860.21                | 713,021.89               | 32° 44' 16.487 N | 103° 38' 26.001 W |
| 10,075.0                    | 85.10              | 181.00         | 9,579.0                     | -699.0          | -57.4           | 632,828.38                | 713,021.55               | 32° 44' 16.172 N | 103° 38' 26.007 W |
| 10,139.0                    | 86.50              | 181.90         | 9,583.7                     | -762.8          | -59.1           | 632,764.57                | 713,019.94               | 32° 44' 15.541 N | 103° 38' 26.031 W |
| 10,235.0                    | 87.60              | 181.60         | 9,588.7                     | -858.7          | -62.0           | 632,668.75                | 713,017.01               | 32° 44' 14.593 N | 103° 38' 26.072 W |
| 10,330.0                    | 89.50              | 179.70         | 9,591.1                     | -953.6          | -63.1           | 632,573.79                | 713,015.93               | 32° 44' 13.653 N | 103° 38' 26.092 W |
| 10,426.0                    | 89.10              | 179.00         | 9,592.2                     | -1,049.6        | -62.0           | 632,477.81                | 713,017.02               | 32° 44' 12.704 N | 103° 38' 26.087 W |
| 10,522.0                    | 89.10              | 179.40         | 9,593.8                     | -1,145.6        | -60.6           | 632,381.83                | 713,018.36               | 32° 44' 11.754 N | 103° 38' 26.079 W |
| 10,618.0                    | 88.80              | 179.40         | 9,595.5                     | -1,241.6        | -59.6           | 632,285.85                | 713,019.37               | 32° 44' 10.804 N | 103° 38' 26.074 W |
| 10,711.0                    | 88.30              | 179.20         | 9,597.9                     | -1,334.5        | -58.5           | 632,192.89                | 713,020.50               | 32° 44' 9.884 N  | 103° 38' 26.068 W |
| 10,807.0                    | 88.00              | 178.40         | 9,601.0                     | -1,430.4        | -56.5           | 632,096.96                | 713,022.51               | 32° 44' 8.935 N  | 103° 38' 26.052 W |
| 10,902.0                    | 87.50              | 178.20         | 9,604.7                     | -1,525.3        | -53.7           | 632,002.07                | 713,025.33               | 32° 44' 7.996 N  | 103° 38' 26.026 W |
| 10,998.0                    | 88.80              | 178.70         | 9,607.8                     | -1,621.2        | -51.1           | 631,906.16                | 713,027.92               | 32° 44' 7.047 N  | 103° 38' 26.003 W |
| 11,092.0                    | 88.40              | 178.10         | 9,610.1                     | -1,715.2        | -48.4           | 631,812.23                | 713,030.55               | 32° 44' 6.117 N  | 103° 38' 25.979 W |
| 11,186.0                    | 88.20              | 177.20         | 9,612.9                     | -1,809.1        | -44.6           | 631,718.35                | 713,034.40               | 32° 44' 5.188 N  | 103° 38' 25.942 W |
| 11,278.0                    | 87.80              | 176.60         | 9,616.1                     | -1,900.9        | -39.6           | 631,626.54                | 713,039.37               | 32° 44' 4.279 N  | 103° 38' 25.890 W |
| 11,373.0                    | 87.10              | 176.30         | 9,620.3                     | -1,995.6        | -33.7           | 631,531.82                | 713,045.25               | 32° 44' 3.341 N  | 103° 38' 25.829 W |
| 11,467.0                    | 86.40              | 175.50         | 9,625.6                     | -2,089.2        | -27.0           | 631,438.21                | 713,051.96               | 32° 44' 2.415 N  | 103° 38' 25.757 W |
| 11,561.0                    | 85.50              | 176.20         | 9,632.3                     | -2,182.7        | -20.3           | 631,344.69                | 713,058.74               | 32° 44' 1.489 N  | 103° 38' 25.685 W |
| 11,656.0                    | 85.80              | 176.80         | 9,639.5                     | -2,277.3        | -14.5           | 631,250.14                | 713,064.53               | 32° 44' 0.553 N  | 103° 38' 25.625 W |
| 11,749.0                    | 86.90              | 177.60         | 9,645.4                     | -2,370.0        | -9.9            | 631,157.44                | 713,069.06               | 32° 43' 59.635 N | 103° 38' 25.579 W |
| 11,844.0                    | 88.50              | 178.50         | 9,649.2                     | -2,464.8        | -6.7            | 631,062.58                | 713,072.29               | 32° 43' 58.697 N | 103° 38' 25.548 W |
| 11,939.0                    | 89.80              | 180.00         | 9,650.6                     | -2,559.8        | -5.5            | 630,967.60                | 713,073.53               | 32° 43' 57.757 N | 103° 38' 25.541 W |
| 12,033.0                    | 90.20              | 179.10         | 9,650.6                     | -2,653.8        | -4.7            | 630,873.61                | 713,074.27               | 32° 43' 56.827 N | 103° 38' 25.539 W |
| 12,127.0                    | 90.20              | 178.30         | 9,650.3                     | -2,747.8        | -2.6            | 630,779.63                | 713,076.40               | 32° 43' 55.897 N | 103° 38' 25.522 W |
| 12,221.0                    | 88.50              | 178.70         | 9,651.4                     | -2,841.7        | -0.1            | 630,685.67                | 713,078.86               | 32° 43' 54.967 N | 103° 38' 25.500 W |
| 12,317.0                    | 88.40              | 180.70         | 9,654.0                     | -2,937.7        | 0.4             | 630,589.72                | 713,079.37               | 32° 43' 54.017 N | 103° 38' 25.502 W |



Wellplanning  
Survey Report - Geographic

|           |                   |                              |                           |
|-----------|-------------------|------------------------------|---------------------------|
| Company:  | COG Operating LLC | Local Co-ordinate Reference: | Well #1H                  |
| Project:  | Lea County, NM    | TVD Reference:               | well1 @ 3913.5usft        |
| Site:     | Scooter Fed Com   | MD Reference:                | well1 @ 3913.5usft        |
| Well:     | #1H               | North Reference:             | Grid                      |
| Wellbore: | OH                | Survey Calculation Method:   | Minimum Curvature         |
| Design:   | OH                | Database:                    | EDM 5000.1 Single User Db |

Survey

| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude         | Longitude         |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|---------------------------|--------------------------|------------------|-------------------|
| 12,412.0                    | 88.20              | 179.90         | 9,656.8                     | -3,032.6        | -0.1            | 630,494.76                | 713,078.87               | 32° 43' 53.078 N | 103° 38' 25.515 W |
| 12,506.0                    | 87.20              | 180.20         | 9,660.6                     | -3,126.6        | -0.2            | 630,400.84                | 713,078.79               | 32° 43' 52.148 N | 103° 38' 25.523 W |
| 12,600.0                    | 88.20              | 180.70         | 9,664.3                     | -3,220.5        | -0.9            | 630,306.92                | 713,078.05               | 32° 43' 51.219 N | 103° 38' 25.539 W |
| 12,695.0                    | 88.00              | 182.40         | 9,667.5                     | -3,315.4        | -3.5            | 630,212.01                | 713,075.48               | 32° 43' 50.280 N | 103° 38' 25.576 W |
| 12,790.0                    | 87.40              | 182.90         | 9,671.3                     | -3,410.2        | -7.9            | 630,117.19                | 713,071.09               | 32° 43' 49.342 N | 103° 38' 25.635 W |
| 12,891.0                    | 87.70              | 183.80         | 9,675.6                     | -3,511.0        | -13.8           | 630,016.45                | 713,065.20               | 32° 43' 48.346 N | 103° 38' 25.711 W |
| 12,990.0                    | 88.70              | 185.30         | 9,678.7                     | -3,609.6        | -21.7           | 629,917.82                | 713,057.35               | 32° 43' 47.370 N | 103° 38' 25.811 W |
| 13,085.0                    | 89.80              | 183.80         | 9,680.0                     | -3,704.3        | -29.2           | 629,823.13                | 713,049.81               | 32° 43' 46.434 N | 103° 38' 25.906 W |
| 13,179.0                    | 90.40              | 180.20         | 9,679.8                     | -3,798.2        | -32.5           | 629,729.20                | 713,046.53               | 32° 43' 45.505 N | 103° 38' 25.952 W |
| 13,274.0                    | 90.30              | 180.10         | 9,679.2                     | -3,893.2        | -32.7           | 629,634.20                | 713,046.28               | 32° 43' 44.565 N | 103° 38' 25.962 W |
| 13,368.0                    | 90.10              | 180.20         | 9,678.9                     | -3,987.2        | -33.0           | 629,540.20                | 713,046.04               | 32° 43' 43.635 N | 103° 38' 25.972 W |
| 13,462.0                    | 91.10              | 179.20         | 9,677.9                     | -4,081.2        | -32.5           | 629,446.21                | 713,046.53               | 32° 43' 42.705 N | 103° 38' 25.973 W |
| 13,557.0                    | 87.40              | 180.30         | 9,679.1                     | -4,176.2        | -32.1           | 629,351.24                | 713,046.94               | 32° 43' 41.765 N | 103° 38' 25.976 W |
| 13,652.0                    | 87.30              | 179.90         | 9,683.5                     | -4,271.1        | -32.2           | 629,256.34                | 713,046.78               | 32° 43' 40.826 N | 103° 38' 25.985 W |
| 13,747.0                    | 88.70              | 179.40         | 9,686.9                     | -4,366.0        | -31.6           | 629,161.40                | 713,047.36               | 32° 43' 39.886 N | 103° 38' 25.986 W |
| 13,841.0                    | 89.80              | 178.80         | 9,688.1                     | -4,460.0        | -30.2           | 629,067.43                | 713,048.83               | 32° 43' 38.956 N | 103° 38' 25.975 W |
| 13,935.0                    | 90.90              | 178.20         | 9,687.5                     | -4,553.9        | -27.7           | 628,973.46                | 713,051.29               | 32° 43' 38.026 N | 103° 38' 25.954 W |
| 14,029.0                    | 89.80              | 178.70         | 9,686.9                     | -4,647.9        | -25.2           | 628,879.50                | 713,053.84               | 32° 43' 37.096 N | 103° 38' 25.931 W |
| 14,094.0                    | 90.00              | 178.80         | 9,687.1                     | -4,712.9        | -23.7           | 628,814.52                | 713,055.25               | 32° 43' 36.453 N | 103° 38' 25.920 W |
| 14,138.0                    | 90.00              | 178.80         | 9,687.1                     | -4,756.9        | -22.8           | 628,770.53                | 713,056.18               | 32° 43' 36.018 N | 103° 38' 25.912 W |

PBHL(SCFC#1)

|             |              |       |
|-------------|--------------|-------|
| Checked By: | Approved By: | Date: |
|-------------|--------------|-------|