

## Results of Directional Survey

|             |                     |           |                                |
|-------------|---------------------|-----------|--------------------------------|
| API number: | <b>30-025-40948</b> |           |                                |
| OGRID:      |                     | Operator: | <b>COG OPERATING LLC</b>       |
|             |                     | Property: | <b>CORAZON STATE UNIT</b> # 6H |

|         |        |          |           |            |            |            |            |
|---------|--------|----------|-----------|------------|------------|------------|------------|
| surface | ULSTR: | <b>D</b> | <b>10</b> | <b>T</b>   | <b>21S</b> | <b>R</b>   | <b>33E</b> |
|         |        |          |           | <b>100</b> | <b>FNL</b> | <b>330</b> | <b>FWL</b> |

|              |           |                |            |             |            |            |            |
|--------------|-----------|----------------|------------|-------------|------------|------------|------------|
| BH Loc       | ULSTR:    | <b>M</b>       | <b>10</b>  | <b>T</b>    | <b>21S</b> | <b>R</b>   | <b>33E</b> |
| <b>16192</b> | <b>MD</b> | <b>11674.1</b> | <b>TVD</b> | <b>336</b>  | <b>FSL</b> | <b>447</b> | <b>FWL</b> |
|              |           |                |            | <b>4944</b> | <b>FNL</b> |            |            |

|              |           |                |            |            |            |            |            |
|--------------|-----------|----------------|------------|------------|------------|------------|------------|
| Top Perf/OH  | ULSTR:    | <b>D</b>       | <b>10</b>  | <b>T</b>   | <b>21S</b> | <b>R</b>   | <b>33E</b> |
| <b>11750</b> | <b>MD</b> | <b>11580.5</b> | <b>TVD</b> | <b>506</b> | <b>FNL</b> | <b>364</b> | <b>FWL</b> |

|              |           |                |            |             |            |            |            |
|--------------|-----------|----------------|------------|-------------|------------|------------|------------|
| Bot Perf/OH  | ULSTR:    | <b>M</b>       | <b>10</b>  | <b>T</b>    | <b>21S</b> | <b>R</b>   | <b>33E</b> |
| <b>16130</b> | <b>MD</b> | <b>11674.9</b> | <b>TVD</b> | <b>398</b>  | <b>FSL</b> | <b>443</b> | <b>FWL</b> |
|              |           |                |            | <b>4882</b> | <b>FNL</b> |            |            |

|              |              |          |        |          |
|--------------|--------------|----------|--------|----------|
|              | MD           | N/S      | E/W    | VD       |
|              | 11718        | -375.40  | 33.20  | 11571    |
| TOP PERFS/OH | <b>11750</b> | -405.90  | 34.00  | 11580.50 |
|              | 11750        | -405.90  | 34.00  | 11580.50 |
|              | 15996        | -4648.20 | 106.20 | 11674.10 |
| BOT PERFS/OH | <b>16130</b> | -4782.01 | 112.95 | 11674.87 |
|              | 16135        | -4787.00 | 113.20 | 11674.90 |

|              |              |          |        |          |
|--------------|--------------|----------|--------|----------|
| NEXT TO LAST | 16135        | -4787.00 | 113.20 | 11674.90 |
| LAST READING | 16192        | -4843.90 | 116.60 | 11674.10 |
| TD           | <b>16192</b> | -4843.90 | 116.60 | 11674.10 |

|                  |      |    |     |    |
|------------------|------|----|-----|----|
| Surface Location | 100  | FN | 330 | FW |
| Projected BHL    | 4944 | FN | 447 | FW |
| Location of      |      |    |     |    |
| Top Perfs/OH     | 506  | FN | 364 | FW |
| Bottom Perfs/OH  | 4882 | FN | 443 | FW |

### SUMMARY of Subsurface Locations

|                         |              |      |    |     |    |             |
|-------------------------|--------------|------|----|-----|----|-------------|
| <b>Surface Location</b> | D-10-21S-33E | 100  | FN | 330 | FW | Vert. Depth |
| <b>Top Perfs/OH</b>     | D-10-21S-33E | 506  | FN | 364 | FW | 11580.50    |
| <b>Bottom Perfs/OH</b>  | M-10-21S-33E | 4882 | FN | 443 | FW | 11674.87    |
| <b>Projected TD</b>     | M-10-21S-33E | 4944 | FN | 447 | FW | 11674.10    |

NOV 12 2013



A GYRO TECHNOLOGIES INC. COMPANY

P.O. Box 261021  
Corpus Christi, Texas 78426  
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612

September 9, 2013

HOBBS OCD

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

OCT 31 2013

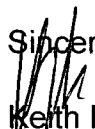
RECEIVED

Attn: Kanicia Castillo

RE: **Corazon State Unit No. 006H**

Please find enclosed a copy of the survey from 0.00' to 10960.00' ran on the above referenced well.

Sincerely,

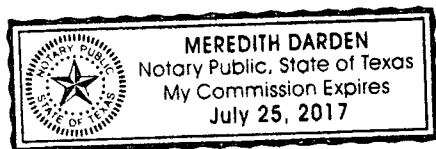
  
Keith Havelka  
Operations

STATE OF TEXAS     §  
                                  §  
COUNTY OF NUECES   §

This instrument was acknowledged before me on the 9th day of September A.D., 2013, by Keith Havelka.



Meredith Darden  
Notary Public, State of Texas



Company: COG Operating LLC (Concho)

Well: Corazon State Unit No. 006H



Rig Name: Precision 105

State/County: New Mexico/Lea

Latitude: 32.50, Longitude: -103.57

GRID North is 0.41 Degrees East of True North

VS-Azi: 178.98 Degrees



Depth Reference : 26'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: corazonstateunit6hgyro.ut

Minimum Curvature Method

Report Date/Time: 9/9/2013 / 09:44

Vaughn Energy Services

Corpus Christi, Texas

800-606-4976

Survey Engineer: Matt Gilchrist

Corazon State Unit No. 006H / API 30-025-40948

HOBBS OCD

OCT 31 2013

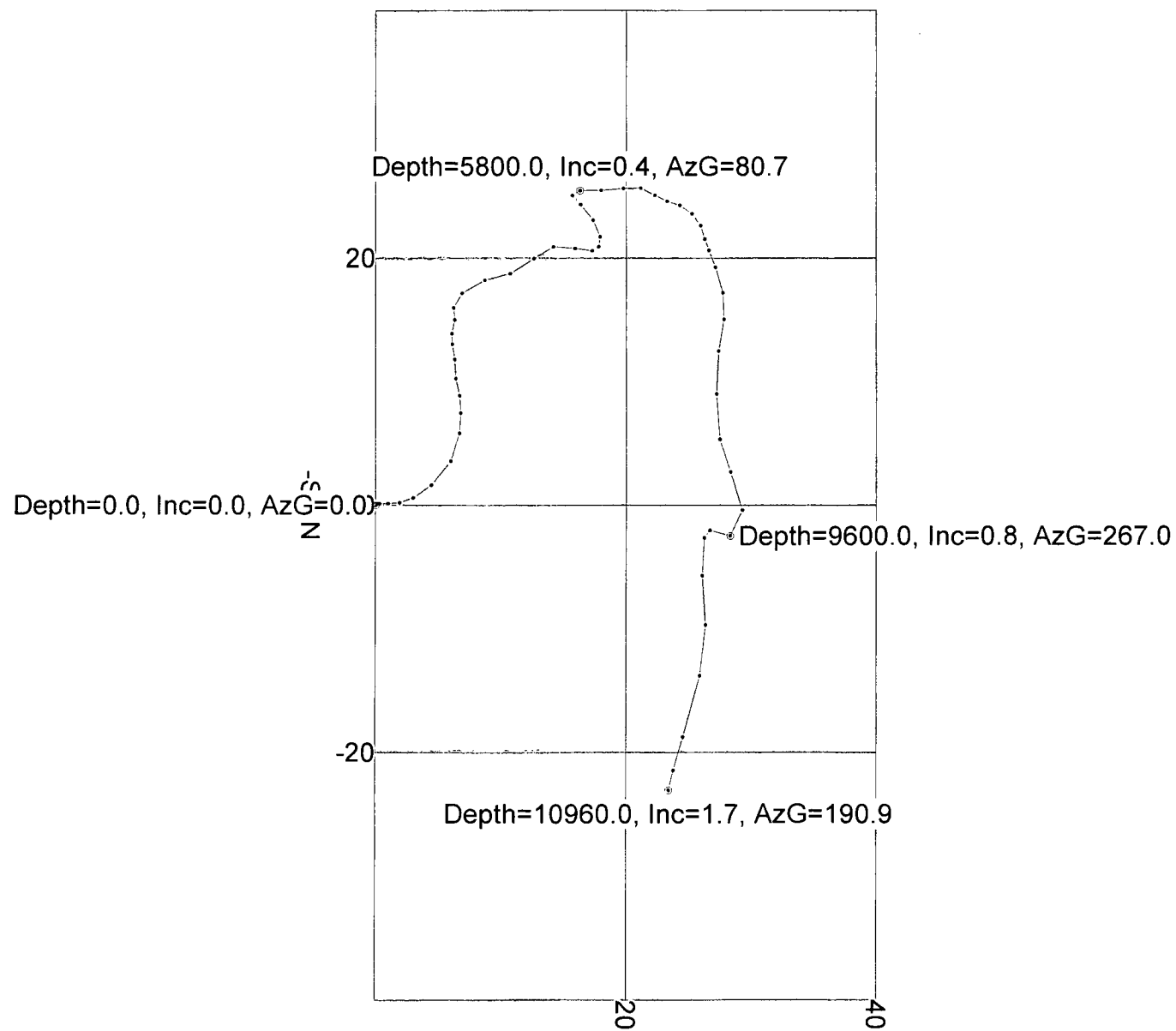
RECEIVED

| 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 |
|-------------------------|----------------------|---------------------------|-----------|-------------|-------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 0.00                    | 0.00                 | 0.00                      | 0.00      | 0.00        | 0.00        | 0.00                      | 0.00                      | 0.00                        | ****                          |
| 200.00                  | 0.05                 | 21.60                     | 200.00    | 0.08        | 0.03        | -0.08                     | 0.09                      | 21.60                       | 0.03                          |
| 400.00                  | 0.14                 | 101.09                    | 400.00    | 0.12        | 0.31        | -0.11                     | 0.33                      | 69.58                       | 0.07                          |
| 600.00                  | 0.26                 | 82.00                     | 600.00    | 0.13        | 1.00        | -0.11                     | 1.01                      | 82.60                       | 0.06                          |
| 800.00                  | 0.27                 | 87.74                     | 800.00    | 0.21        | 1.92        | -0.18                     | 1.93                      | 83.72                       | 0.01                          |
| 1000.00                 | 0.42                 | 59.97                     | 999.99    | 0.59        | 3.02        | -0.54                     | 3.08                      | 78.88                       | 0.11                          |
| 1200.00                 | 0.62                 | 51.23                     | 1199.98   | 1.64        | 4.50        | -1.56                     | 4.79                      | 69.98                       | 0.11                          |
| 1400.00                 | 0.82                 | 29.23                     | 1399.97   | 3.56        | 6.04        | -3.46                     | 7.02                      | 59.47                       | 0.17                          |
| 1600.00                 | 0.59                 | 0.85                      | 1599.95   | 5.83        | 6.75        | -5.71                     | 8.92                      | 49.20                       | 0.20                          |
| 1800.00                 | 0.35                 | 9.11                      | 1799.95   | 7.46        | 6.87        | -7.34                     | 10.14                     | 42.63                       | 0.12                          |
| 2000.00                 | 0.48                 | 346.88                    | 1999.94   | 8.88        | 6.78        | -8.75                     | 11.17                     | 37.36                       | 0.10                          |
| 2200.00                 | 0.34                 | 348.80                    | 2199.94   | 10.26       | 6.47        | -10.15                    | 12.14                     | 32.23                       | 0.07                          |
| 2400.00                 | 0.55                 | 1.61                      | 2399.93   | 11.80       | 6.38        | -11.69                    | 13.42                     | 28.41                       | 0.11                          |
| 2600.00                 | 0.21                 | 320.02                    | 2599.93   | 13.04       | 6.17        | -12.93                    | 14.43                     | 25.32                       | 0.21                          |
| 2800.00                 | 0.35                 | 19.33                     | 2799.92   | 13.90       | 6.13        | -13.79                    | 15.19                     | 23.80                       | 0.15                          |
| 3000.00                 | 0.32                 | 5.01                      | 2999.92   | 15.03       | 6.38        | -14.92                    | 16.33                     | 23.00                       | 0.04                          |
| 3200.00                 | 0.25                 | 338.07                    | 3199.92   | 15.99       | 6.27        | -15.88                    | 17.18                     | 21.40                       | 0.08                          |
| 3400.00                 | 0.67                 | 48.41                     | 3399.91   | 17.17       | 6.98        | -17.04                    | 18.53                     | 22.12                       | 0.31                          |
| 3600.00                 | 0.56                 | 74.29                     | 3599.90   | 18.20       | 8.79        | -18.04                    | 20.21                     | 25.76                       | 0.15                          |

| 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 |
|-------------------------|----------------------|---------------------------|-----------|-------------|-------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 3800.00                 | 0.63                 | 75.35                     | 3799.89   | 18.74       | 10.78       | -18.55                    | 21.62                     | 29.90                       | 0.03                          |
| 4000.00                 | 0.72                 | 42.14                     | 3999.88   | 19.95       | 12.67       | -19.72                    | 23.63                     | 32.43                       | 0.20                          |
| 4200.00                 | 0.40                 | 85.36                     | 4199.87   | 20.93       | 14.21       | -20.67                    | 25.30                     | 34.18                       | 0.25                          |
| 4400.00                 | 0.59                 | 101.32                    | 4399.86   | 20.78       | 15.92       | -20.50                    | 26.18                     | 37.46                       | 0.12                          |
| 4600.00                 | 0.20                 | 86.05                     | 4599.86   | 20.60       | 17.28       | -20.29                    | 26.89                     | 39.99                       | 0.20                          |
| 4800.00                 | 0.20                 | 31.98                     | 4799.86   | 20.92       | 17.81       | -20.60                    | 27.47                     | 40.42                       | 0.09                          |
| 5000.00                 | 0.30                 | 353.48                    | 4999.85   | 21.73       | 17.93       | -21.40                    | 28.17                     | 39.54                       | 0.09                          |
| 5200.00                 | 0.55                 | 327.33                    | 5199.85   | 23.06       | 17.35       | -22.75                    | 28.86                     | 36.96                       | 0.16                          |
| 5400.00                 | 0.37                 | 313.87                    | 5399.84   | 24.32       | 16.36       | -24.03                    | 29.31                     | 33.93                       | 0.11                          |
| 5600.00                 | 0.19                 | 328.55                    | 5599.84   | 25.05       | 15.73       | -24.76                    | 29.58                     | 32.12                       | 0.10                          |
| 5800.00                 | 0.44                 | 80.70                     | 5799.84   | 25.45       | 16.31       | -25.16                    | 30.23                     | 32.66                       | 0.27                          |
| 6000.00                 | 0.54                 | 97.05                     | 5999.83   | 25.46       | 18.01       | -25.13                    | 31.18                     | 35.27                       | 0.09                          |
| 6200.00                 | 0.50                 | 73.10                     | 6199.82   | 25.60       | 19.78       | -25.24                    | 32.35                     | 37.69                       | 0.11                          |
| 6400.00                 | 0.34                 | 111.53                    | 6399.82   | 25.64       | 21.16       | -25.26                    | 33.24                     | 39.54                       | 0.16                          |
| 6600.00                 | 0.40                 | 120.52                    | 6599.81   | 25.07       | 22.31       | -24.67                    | 33.56                     | 41.67                       | 0.04                          |
| 6800.00                 | 0.23                 | 110.56                    | 6799.81   | 24.57       | 23.28       | -24.15                    | 33.85                     | 43.45                       | 0.09                          |
| 7000.00                 | 0.38                 | 105.91                    | 6999.81   | 24.25       | 24.29       | -23.82                    | 34.32                     | 45.05                       | 0.08                          |
| 7200.00                 | 0.35                 | 144.63                    | 7199.80   | 23.58       | 25.28       | -23.12                    | 34.57                     | 46.99                       | 0.12                          |
| 7400.00                 | 0.32                 | 142.78                    | 7399.80   | 22.64       | 25.97       | -22.17                    | 34.45                     | 48.92                       | 0.01                          |
| 7600.00                 | 0.38                 | 179.98                    | 7599.80   | 21.54       | 26.31       | -21.06                    | 34.00                     | 50.69                       | 0.11                          |
| 7800.00                 | 0.23                 | 127.78                    | 7799.79   | 20.63       | 26.62       | -20.16                    | 33.68                     | 52.22                       | 0.15                          |
| 8000.00                 | 0.65                 | 169.21                    | 7999.79   | 19.27       | 27.16       | -18.78                    | 33.30                     | 54.64                       | 0.25                          |
| 8200.00                 | 0.59                 | 158.36                    | 8199.78   | 17.20       | 27.75       | -16.70                    | 32.65                     | 58.21                       | 0.07                          |
| 8400.00                 | 0.71                 | 193.93                    | 8399.76   | 15.04       | 27.83       | -14.55                    | 31.64                     | 61.61                       | 0.21                          |
| 8600.00                 | 0.78                 | 185.40                    | 8599.75   | 12.49       | 27.41       | -12.00                    | 30.12                     | 65.50                       | 0.07                          |
| 8800.00                 | 1.23                 | 180.85                    | 8799.72   | 8.99        | 27.25       | -8.50                     | 28.69                     | 71.74                       | 0.22                          |
| 9000.00                 | 0.89                 | 169.25                    | 8999.68   | 5.31        | 27.50       | -4.82                     | 28.01                     | 79.07                       | 0.20                          |
| 9200.00                 | 0.70                 | 152.20                    | 9199.66   | 2.70        | 28.37       | -2.19                     | 28.49                     | 84.57                       | 0.15                          |
| 9400.00                 | 1.18                 | 169.06                    | 9399.64   | -0.41       | 29.33       | 0.93                      | 29.33                     | 90.79                       | 0.27                          |
| 9600.00                 | 0.80                 | 267.02                    | 9599.62   | -2.50       | 28.33       | 3.00                      | 28.44                     | 95.03                       | 0.76                          |
| 9800.00                 | 0.33                 | 336.93                    | 9799.61   | -2.03       | 26.71       | 2.51                      | 26.78                     | 94.36                       | 0.38                          |
| 10000.00                | 0.67                 | 190.83                    | 9999.60   | -2.65       | 26.26       | 3.12                      | 26.39                     | 95.77                       | 0.48                          |
| 10200.00                | 1.09                 | 178.11                    | 10199.58  | -5.71       | 26.10       | 6.18                      | 26.72                     | 102.34                      | 0.23                          |
| 10400.00                | 1.19                 | 174.59                    | 10399.54  | -9.69       | 26.36       | 10.16                     | 28.09                     | 110.19                      | 0.06                          |
| 10600.00                | 1.22                 | 197.58                    | 10599.50  | -13.79      | 25.92       | 14.25                     | 29.36                     | 118.03                      | 0.24                          |
| 10800.00                | 1.73                 | 193.81                    | 10799.43  | -18.76      | 24.55       | 19.19                     | 30.90                     | 127.38                      | 0.26                          |
| 10900.00                | 1.46                 | 196.91                    | 10899.39  | -21.45      | 23.82       | 21.87                     | 32.05                     | 132.01                      | 0.28                          |
| 10960.00                | 1.70                 | 190.86                    | 10959.37  | -23.06      | 23.43       | 23.47                     | 32.87                     | 134.54                      | 0.48                          |



Vaughn Energy Services  
Corpus Christi, Texas  
800-606-4976  
Survey Engineer: Matt Gilchrist  
Corazon State Unit No. 006H / API 30-025-40948



-W/+E  
VES Survey Date: 09/04/2013



## **COG Operating, LLC**

**Lea County, NM  
Sec 10, T21S, R33E  
Corazon State Unit #6H**

**Wellbore #1**

**Design: Wellbore #1**

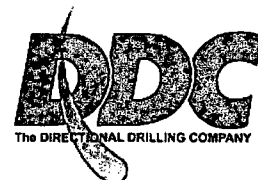
## **DDC Survey Report**

**12 September, 2013**

**HOBBS OCD**

**OCT 31 2013**

**RECEIVED**





DDC  
Survey Report



|                  |                        |                                     |                                        |
|------------------|------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | COG Operating, LLC     | <b>Local Co-ordinate Reference:</b> | Well Corazon State Unit #6H            |
| <b>Project:</b>  | Lea County, NM         | <b>TVD Reference:</b>               | WELL @ 3860.0usft (Original Well Elev) |
| <b>Site:</b>     | Sec 10, T21S, R33E     | <b>MD Reference:</b>                | WELL @ 3860.0usft (Original Well Elev) |
| <b>Well:</b>     | Corazon State Unit #6H | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Wellbore #1            | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Wellbore #1            | <b>Database:</b>                    | EDM 5000.1 Single User Db              |

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

|                              |                    |                     |                 |                          |                   |
|------------------------------|--------------------|---------------------|-----------------|--------------------------|-------------------|
| <b>Site</b>                  | Sec 10, T21S, R33E |                     |                 |                          |                   |
| <b>Site Position:</b>        |                    | <b>Northing:</b>    | 546,554.30 usft | <b>Latitude:</b>         | 32° 30' 0.712 N   |
| <b>From:</b>                 | Map                | <b>Easting:</b>     | 739,115.90 usft | <b>Longitude:</b>        | 103° 33' 27.895 W |
| <b>Position Uncertainty:</b> | 0.0 usft           | <b>Slot Radius:</b> | 13-3/16 "       | <b>Grid Convergence:</b> | 0.42 °            |

|                             |                        |          |                            |                 |                                    |
|-----------------------------|------------------------|----------|----------------------------|-----------------|------------------------------------|
| <b>Well</b>                 | Corazon State Unit #6H |          |                            |                 |                                    |
| <b>Well Position</b>        | <b>+N/-S</b>           | 0.0 usft | <b>Northing:</b>           | 546,543.10 usft | <b>Latitude:</b> 32° 30' 0.815 N   |
|                             | <b>+E/-W</b>           | 0.0 usft | <b>Easting:</b>            | 736,128.30 usft | <b>Longitude:</b> 103° 34' 2.779 W |
| <b>Position Uncertainty</b> | 0.0 usft               |          | <b>Wellhead Elevation:</b> | usft            | <b>Ground Level:</b> 3,834.0 usft  |

|                 |             |  |  |  |  |
|-----------------|-------------|--|--|--|--|
| <b>Wellbore</b> | Wellbore #1 |  |  |  |  |
|-----------------|-------------|--|--|--|--|

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 6/26/2013          | 7.35                   | 60.39                | 48,577                     |

|               |             |  |  |  |  |
|---------------|-------------|--|--|--|--|
| <b>Design</b> | Wellbore #1 |  |  |  |  |
|---------------|-------------|--|--|--|--|

|                     |     |               |        |                      |     |
|---------------------|-----|---------------|--------|----------------------|-----|
| <b>Audit Notes:</b> |     |               |        |                      |     |
| <b>Version:</b>     | 1.0 | <b>Phase:</b> | ACTUAL | <b>Tie On Depth:</b> | 0.0 |

|                          |                                |                     |                     |                      |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Direction (°)</b> |
|                          | 0.0                            | 0.0                 | 0.0                 | 178.98               |

|                       |                  |                          |                  |                    |  |
|-----------------------|------------------|--------------------------|------------------|--------------------|--|
| <b>Survey Program</b> | <b>Date</b>      | 9/12/2013                |                  |                    |  |
| <b>From (usft)</b>    | <b>To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b> |  |
| 200.0                 | 10,960.0         | GYRO (Wellbore #1)       | Good_gyro        | Good Gyro          |  |
| 11,027.0              | 16,192.0         | DDC MWD (Wellbore #1)    |                  |                    |  |

|                              |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|--|
| <b>Survey</b>                |                        |                    |                              |                     |                     |                                |                                |                               |                              |  |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Vertical Section (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> |  |
| 0.0                          | 0.00                   | 0.00               | 0.0                          | 0.0                 | 0.0                 | 0.0                            | 0.00                           | 0.00                          | 0.00                         |  |
| 200.0                        | 0.05                   | 21.60              | 200.0                        | 0.1                 | 0.0                 | -0.1                           | 0.03                           | 0.03                          | 0.00                         |  |
| 400.0                        | 0.14                   | 101.09             | 400.0                        | 0.1                 | 0.3                 | -0.1                           | 0.07                           | 0.05                          | 39.75                        |  |
| 600.0                        | 0.26                   | 82.00              | 600.0                        | 0.1                 | 1.0                 | -0.1                           | 0.07                           | 0.06                          | -9.55                        |  |
| 800.0                        | 0.27                   | 87.74              | 800.0                        | 0.2                 | 1.9                 | -0.2                           | 0.01                           | 0.01                          | 2.87                         |  |
| 1,000.0                      | 0.42                   | 59.97              | 1,000.0                      | 0.6                 | 3.0                 | -0.5                           | 0.11                           | 0.08                          | -13.89                       |  |
| 1,200.0                      | 0.62                   | 51.23              | 1,200.0                      | 1.6                 | 4.5                 | -1.6                           | 0.11                           | 0.10                          | -4.37                        |  |
| 1,400.0                      | 0.82                   | 29.23              | 1,400.0                      | 3.6                 | 6.0                 | -3.5                           | 0.17                           | 0.10                          | -11.00                       |  |
| 1,600.0                      | 0.59                   | 0.85               | 1,600.0                      | 5.8                 | 6.8                 | -5.7                           | 0.21                           | -0.12                         | -14.19                       |  |
| 1,800.0                      | 0.35                   | 9.11               | 1,799.9                      | 7.5                 | 6.9                 | -7.4                           | 0.12                           | -0.12                         | 4.13                         |  |



DDC  
Survey Report



|           |                        |                              |                                        |
|-----------|------------------------|------------------------------|----------------------------------------|
| Company:  | COG Operating, LLC     | Local Co-ordinate Reference: | Well Corazon State Unit #6H            |
| Project:  | Lea County, NM         | TVD Reference:               | WELL @ 3860.0usft (Original Well Elev) |
| Site:     | Sec 10, T21S, R33E     | MD Reference:                | WELL @ 3860.0usft (Original Well Elev) |
| Well:     | Corazon State Unit #6H | North Reference:             | Grid                                   |
| Wellbore: | Wellbore #1            | Survey Calculation Method:   | Minimum Curvature                      |
| Design:   | Wellbore #1            | Database:                    | EDM 5000.1 Single User Db              |

| Survey                |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 2,000.0               | 0.48            | 346.88      | 1,999.9               | 8.9          | 6.8          | -8.8                    | 0.10                    | 0.07                   | -11.12                |
| 2,200.0               | 0.34            | 348.80      | 2,199.9               | 10.3         | 6.5          | -10.2                   | 0.07                    | -0.07                  | 0.96                  |
| 2,400.0               | 0.55            | 1.61        | 2,399.9               | 11.8         | 6.4          | -11.7                   | 0.12                    | 0.11                   | 6.41                  |
| 2,600.0               | 0.21            | 320.02      | 2,599.9               | 13.1         | 6.2          | -13.0                   | 0.21                    | -0.17                  | -20.80                |
| 2,800.0               | 0.35            | 19.33       | 2,799.9               | 13.9         | 6.1          | -13.8                   | 0.15                    | 0.07                   | 29.66                 |
| 3,000.0               | 0.32            | 5.01        | 2,999.9               | 15.1         | 6.4          | -15.0                   | 0.04                    | -0.02                  | -7.16                 |
| 3,200.0               | 0.25            | 338.07      | 3,199.9               | 16.0         | 6.3          | -15.9                   | 0.07                    | -0.04                  | -13.47                |
| 3,400.0               | 0.67            | 48.41       | 3,399.9               | 17.2         | 7.0          | -17.1                   | 0.32                    | 0.21                   | 35.17                 |
| 3,600.0               | 0.56            | 74.29       | 3,599.9               | 18.3         | 8.8          | -18.1                   | 0.15                    | -0.06                  | 12.94                 |
| 3,800.0               | 0.63            | 75.35       | 3,799.9               | 18.8         | 10.8         | -18.6                   | 0.04                    | 0.04                   | 0.53                  |
| 4,000.0               | 0.72            | 42.14       | 3,999.9               | 20.0         | 12.7         | -19.8                   | 0.20                    | 0.05                   | -16.61                |
| 4,200.0               | 0.40            | 85.36       | 4,199.9               | 21.0         | 14.3         | -20.7                   | 0.25                    | -0.16                  | 21.61                 |
| 4,400.0               | 0.59            | 101.32      | 4,399.9               | 20.8         | 16.0         | -20.6                   | 0.12                    | 0.10                   | 7.98                  |
| 4,600.0               | 0.20            | 86.05       | 4,599.9               | 20.7         | 17.3         | -20.4                   | 0.20                    | -0.20                  | -7.64                 |
| 4,800.0               | 0.20            | 31.98       | 4,799.9               | 21.0         | 17.8         | -20.7                   | 0.09                    | 0.00                   | -27.04                |
| 5,000.0               | 0.30            | 353.48      | 4,999.9               | 21.8         | 18.0         | -21.5                   | 0.09                    | 0.05                   | -19.25                |
| 5,200.0               | 0.55            | 327.33      | 5,199.8               | 23.1         | 17.4         | -22.8                   | 0.16                    | 0.13                   | -13.08                |
| 5,400.0               | 0.37            | 313.87      | 5,399.8               | 24.4         | 16.4         | -24.1                   | 0.10                    | -0.09                  | -6.73                 |
| 5,600.0               | 0.19            | 328.55      | 5,599.8               | 25.1         | 15.8         | -24.8                   | 0.10                    | -0.09                  | 7.34                  |
| 5,800.0               | 0.44            | 80.70       | 5,799.8               | 25.5         | 16.4         | -25.2                   | 0.27                    | 0.13                   | 56.08                 |
| 6,000.0               | 0.54            | 97.05       | 5,999.8               | 25.5         | 18.1         | -25.2                   | 0.09                    | 0.05                   | 8.18                  |
| 6,200.0               | 0.50            | 73.10       | 6,199.8               | 25.7         | 19.8         | -25.3                   | 0.11                    | -0.02                  | -11.98                |
| 6,400.0               | 0.34            | 111.53      | 6,399.8               | 25.7         | 21.2         | -25.3                   | 0.16                    | -0.08                  | 19.22                 |
| 6,600.0               | 0.40            | 120.52      | 6,599.8               | 25.1         | 22.4         | -24.7                   | 0.04                    | 0.03                   | 4.50                  |
| 6,800.0               | 0.23            | 110.56      | 6,799.8               | 24.6         | 23.3         | -24.2                   | 0.09                    | -0.09                  | -4.98                 |
| 7,000.0               | 0.38            | 105.91      | 6,999.8               | 24.3         | 24.4         | -23.9                   | 0.08                    | 0.08                   | -2.33                 |
| 7,200.0               | 0.35            | 144.63      | 7,199.8               | 23.6         | 25.3         | -23.2                   | 0.12                    | -0.02                  | 19.36                 |
| 7,400.0               | 0.32            | 142.78      | 7,399.8               | 22.7         | 26.0         | -22.2                   | 0.02                    | -0.02                  | -0.93                 |
| 7,600.0               | 0.38            | 179.98      | 7,599.8               | 21.6         | 26.4         | -21.1                   | 0.12                    | 0.03                   | 18.60                 |
| 7,800.0               | 0.23            | 127.78      | 7,799.8               | 20.7         | 26.7         | -20.2                   | 0.15                    | -0.08                  | -26.10                |
| 8,000.0               | 0.65            | 169.21      | 7,999.8               | 19.3         | 27.2         | -18.8                   | 0.25                    | 0.21                   | 20.72                 |
| 8,200.0               | 0.59            | 158.36      | 8,199.8               | 17.2         | 27.8         | -16.7                   | 0.07                    | -0.03                  | -5.43                 |
| 8,400.0               | 0.71            | 193.93      | 8,399.8               | 15.1         | 27.9         | -14.6                   | 0.21                    | 0.06                   | 17.79                 |
| 8,600.0               | 0.78            | 185.40      | 8,599.7               | 12.5         | 27.5         | -12.0                   | 0.07                    | 0.04                   | -4.27                 |
| 8,800.0               | 1.23            | 180.85      | 8,799.7               | 9.0          | 27.3         | -8.5                    | 0.23                    | 0.23                   | -2.28                 |
| 9,000.0               | 0.89            | 169.25      | 8,999.7               | 5.4          | 27.6         | -4.9                    | 0.20                    | -0.17                  | -5.80                 |
| 9,200.0               | 0.70            | 152.20      | 9,199.7               | 2.7          | 28.4         | -2.2                    | 0.15                    | -0.10                  | -8.53                 |
| 9,400.0               | 1.18            | 169.06      | 9,399.6               | -0.4         | 29.4         | 0.9                     | 0.27                    | 0.24                   | 8.43                  |
| 9,600.0               | 0.80            | 267.02      | 9,599.6               | -2.4         | 28.4         | 3.0                     | 0.76                    | -0.19                  | 48.98                 |
| 9,800.0               | 0.33            | 336.93      | 9,799.6               | -2.0         | 26.8         | 2.5                     | 0.38                    | -0.24                  | 34.96                 |
| 10,000.0              | 0.67            | 190.83      | 9,999.6               | -2.6         | 26.3         | 3.1                     | 0.48                    | 0.17                   | -73.05                |
| 10,200.0              | 1.09            | 178.11      | 10,199.6              | -5.7         | 26.2         | 6.1                     | 0.23                    | 0.21                   | -6.36                 |
| 10,400.0              | 1.19            | 174.59      | 10,399.5              | -9.6         | 26.4         | 10.1                    | 0.06                    | 0.05                   | -1.76                 |



DDC  
Survey Report



|                  |                        |                                     |                                        |
|------------------|------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | COG Operating, LLC     | <b>Local Co-ordinate Reference:</b> | Well Corazon State Unit #6H            |
| <b>Project:</b>  | Lea County, NM         | <b>TVD Reference:</b>               | WELL @ 3860.0usft (Original Well Elev) |
| <b>Site:</b>     | Sec 10, T21S, R33E     | <b>MD Reference:</b>                | WELL @ 3860.0usft (Original Well Elev) |
| <b>Well:</b>     | Corazon State Unit #6H | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Wellbore #1            | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Wellbore #1            | <b>Database:</b>                    | EDM 5000.1 Single User Db              |

Survey

| Measured Depth (usft)                                | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|------------------------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 10,600.0                                             | 1.22            | 197.58      | 10,599.5              | -13.7        | 26.0         | 14.2                    | 0.24                    | 0.02                   | 11.50                 |
| 10,800.0                                             | 1.73            | 193.81      | 10,799.4              | -18.7        | 24.6         | 19.1                    | 0.26                    | 0.26                   | -1.89                 |
| 10,900.0                                             | 1.46            | 196.91      | 10,899.4              | -21.4        | 23.9         | 21.8                    | 0.28                    | -0.27                  | 3.10                  |
| <b>TIE IN @ 10960' MD / 10959.4' TVD</b>             |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,960.0                                             | 1.70            | 190.86      | 10,959.4              | -23.0        | 23.5         | 23.4                    | 0.49                    | 0.40                   | -10.08                |
| 11,027.0                                             | 1.50            | 199.90      | 11,026.3              | -24.8        | 23.0         | 25.2                    | 0.48                    | -0.30                  | 13.49                 |
| 11,090.0                                             | 3.00            | 202.80      | 11,089.3              | -27.1        | 22.1         | 27.5                    | 2.39                    | 2.38                   | 4.60                  |
| 11,122.0                                             | 6.10            | 191.00      | 11,121.2              | -29.5        | 21.4         | 29.9                    | 10.07                   | 9.69                   | -36.88                |
| 11,153.0                                             | 9.70            | 184.10      | 11,151.9              | -33.7        | 20.9         | 34.1                    | 11.99                   | 11.61                  | -22.26                |
| 11,185.0                                             | 13.30           | 178.90      | 11,183.2              | -40.1        | 20.8         | 40.5                    | 11.70                   | 11.25                  | -16.25                |
| 11,217.0                                             | 17.30           | 175.70      | 11,214.1              | -48.5        | 21.2         | 48.9                    | 12.77                   | 12.50                  | -10.00                |
| 11,248.0                                             | 21.40           | 174.30      | 11,243.3              | -58.8        | 22.1         | 59.2                    | 13.31                   | 13.23                  | -4.52                 |
| 11,280.0                                             | 24.80           | 176.70      | 11,272.8              | -71.3        | 23.1         | 71.7                    | 11.02                   | 10.63                  | 7.50                  |
| 11,312.0                                             | 27.70           | 179.70      | 11,301.5              | -85.4        | 23.5         | 85.8                    | 9.96                    | 9.06                   | 9.38                  |
| 11,343.0                                             | 29.80           | 180.30      | 11,328.7              | -100.3       | 23.5         | 100.7                   | 6.84                    | 6.77                   | 1.94                  |
| 11,375.0                                             | 32.20           | 179.90      | 11,356.1              | -116.8       | 23.5         | 117.2                   | 7.53                    | 7.50                   | -1.25                 |
| 11,402.0                                             | 34.40           | 180.40      | 11,378.6              | -131.6       | 23.5         | 132.0                   | 8.21                    | 8.15                   | 1.85                  |
| 11,434.0                                             | 37.50           | 179.40      | 11,404.5              | -150.4       | 23.5         | 150.8                   | 9.86                    | 9.69                   | -3.13                 |
| 11,466.0                                             | 41.20           | 178.10      | 11,429.3              | -170.7       | 24.0         | 171.1                   | 11.85                   | 11.56                  | -4.06                 |
| 11,495.0                                             | 44.40           | 177.30      | 11,450.6              | -190.4       | 24.8         | 190.8                   | 11.19                   | 11.03                  | -2.76                 |
| 11,529.0                                             | 47.50           | 176.90      | 11,474.2              | -214.8       | 26.0         | 215.2                   | 9.16                    | 9.12                   | -1.18                 |
| <b>CROSSED HARDLINE @ 11549.1' MD / 11487.5' TVD</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 11,549.1                                             | 49.51           | 176.77      | 11,487.5              | -229.8       | 26.8         | 230.3                   | 10.01                   | 10.00                  | -0.64                 |
| 11,561.0                                             | 50.70           | 176.70      | 11,495.1              | -238.9       | 27.3         | 239.4                   | 10.01                   | 10.00                  | -0.61                 |
| 11,589.0                                             | 54.60           | 176.70      | 11,512.1              | -261.1       | 28.6         | 261.6                   | 13.93                   | 13.93                  | 0.00                  |
| 11,624.0                                             | 59.00           | 178.30      | 11,531.3              | -290.4       | 29.9         | 290.9                   | 13.14                   | 12.57                  | 4.57                  |
| 11,655.0                                             | 63.00           | 177.80      | 11,546.3              | -317.5       | 30.8         | 318.0                   | 12.98                   | 12.90                  | -1.61                 |
| 11,686.0                                             | 67.00           | 177.40      | 11,559.4              | -345.6       | 32.0         | 346.1                   | 12.96                   | 12.90                  | -1.29                 |
| 11,718.0                                             | 70.60           | 178.00      | 11,571.0              | -375.4       | 33.2         | 375.9                   | 11.38                   | 11.25                  | 1.88                  |
| 11,750.0                                             | 74.90           | 178.90      | 11,580.5              | -405.9       | 34.0         | 406.4                   | 13.70                   | 13.44                  | 2.81                  |
| 11,771.0                                             | 77.70           | 179.40      | 11,585.4              | -426.3       | 34.3         | 426.8                   | 13.53                   | 13.33                  | 2.38                  |
| 11,818.0                                             | 83.70           | 179.70      | 11,593.0              | -472.7       | 34.7         | 473.2                   | 12.78                   | 12.77                  | 0.64                  |
| 11,850.0                                             | 85.70           | 180.40      | 11,596.0              | -504.5       | 34.6         | 505.1                   | 6.62                    | 6.25                   | 2.19                  |
| 11,881.0                                             | 87.70           | 180.30      | 11,597.8              | -535.5       | 34.5         | 536.0                   | 6.46                    | 6.45                   | -0.32                 |
| 11,941.0                                             | 88.20           | 179.00      | 11,599.9              | -595.4       | 34.8         | 596.0                   | 2.32                    | 0.83                   | -2.17                 |
| 12,005.0                                             | 88.50           | 179.90      | 11,601.8              | -659.4       | 35.4         | 659.9                   | 1.48                    | 0.47                   | 1.41                  |
| 12,100.0                                             | 88.50           | 179.20      | 11,604.3              | -754.4       | 36.2         | 754.9                   | 0.74                    | 0.00                   | -0.74                 |
| 12,195.0                                             | 87.50           | 180.10      | 11,607.6              | -849.3       | 36.8         | 849.8                   | 1.42                    | -1.05                  | 0.95                  |
| 12,290.0                                             | 90.80           | 178.30      | 11,609.0              | -944.3       | 38.1         | 944.8                   | 3.96                    | 3.47                   | -1.89                 |
| 12,385.0                                             | 90.00           | 177.40      | 11,608.3              | -1,039.2     | 41.7         | 1,039.8                 | 1.27                    | -0.84                  | -0.95                 |
| 12,480.0                                             | 90.20           | 178.10      | 11,608.2              | -1,134.1     | 45.4         | 1,134.7                 | 0.77                    | 0.21                   | 0.74                  |
| 12,575.0                                             | 88.00           | 177.40      | 11,609.6              | -1,229.0     | 49.1         | 1,229.7                 | 2.43                    | -2.32                  | -0.74                 |
| 12,670.0                                             | 88.30           | 177.30      | 11,612.7              | -1,323.9     | 53.5         | 1,324.6                 | 0.33                    | 0.32                   | -0.11                 |
| 12,765.0                                             | 87.70           | 178.00      | 11,616.0              | -1,418.7     | 57.4         | 1,419.5                 | 0.97                    | -0.63                  | 0.74                  |



DDC  
Survey Report



|                  |                        |                                     |                                        |
|------------------|------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | COG Operating, LLC     | <b>Local Co-ordinate Reference:</b> | Well Corazon State Unit #6H            |
| <b>Project:</b>  | Lea County, NM         | <b>TVD Reference:</b>               | WELL @ 3860.0usft (Original Well Elev) |
| <b>Site:</b>     | Sec 10, T21S, R33E     | <b>MD Reference:</b>                | WELL @ 3860.0usft (Original Well Elev) |
| <b>Well:</b>     | Corazon State Unit #6H | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Wellbore #1            | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Wellbore #1            | <b>Database:</b>                    | EDM 5000.1 Single User Db              |

Survey

| Measured Depth (usft)         | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 12,860.0                      | 88.60           | 178.50      | 11,619.1              | -1,513.6     | 60.3         | 1,514.5                 | 1.08                    | 0.95                   | 0.53                  |
| 12,955.0                      | 88.30           | 179.20      | 11,621.7              | -1,608.6     | 62.2         | 1,609.4                 | 0.80                    | -0.32                  | 0.74                  |
| 13,051.0                      | 88.10           | 177.10      | 11,624.7              | -1,704.5     | 65.3         | 1,705.4                 | 2.20                    | -0.21                  | -2.19                 |
| 13,177.0                      | 89.90           | 180.60      | 11,626.9              | -1,830.4     | 67.8         | 1,831.3                 | 3.12                    | 1.43                   | 2.78                  |
| 13,240.0                      | 89.80           | 180.10      | 11,627.0              | -1,893.4     | 67.4         | 1,894.3                 | 0.81                    | -0.16                  | -0.79                 |
| 13,336.0                      | 88.90           | 179.70      | 11,628.1              | -1,989.4     | 67.6         | 1,990.3                 | 1.03                    | -0.94                  | -0.42                 |
| 13,430.0                      | 87.80           | 179.40      | 11,630.8              | -2,083.4     | 68.3         | 2,084.2                 | 1.21                    | -1.17                  | -0.32                 |
| 13,525.0                      | 88.10           | 178.70      | 11,634.2              | -2,178.3     | 69.9         | 2,179.2                 | 0.80                    | 0.32                   | -0.74                 |
| 13,621.0                      | 89.30           | 180.60      | 11,636.4              | -2,274.3     | 70.5         | 2,275.1                 | 2.34                    | 1.25                   | 1.98                  |
| 13,715.0                      | 89.30           | 180.30      | 11,637.6              | -2,368.2     | 69.8         | 2,369.1                 | 0.32                    | 0.00                   | -0.32                 |
| 13,810.0                      | 89.00           | 178.30      | 11,639.0              | -2,463.2     | 70.9         | 2,464.1                 | 2.13                    | -0.32                  | -2.11                 |
| 13,905.0                      | 89.00           | 179.60      | 11,640.6              | -2,558.2     | 72.7         | 2,559.1                 | 1.37                    | 0.00                   | 1.37                  |
| 14,000.0                      | 88.90           | 177.60      | 11,642.4              | -2,653.1     | 75.0         | 2,654.1                 | 2.11                    | -0.11                  | -2.11                 |
| 14,095.0                      | 88.80           | 177.10      | 11,644.3              | -2,748.0     | 79.4         | 2,749.0                 | 0.54                    | -0.11                  | -0.53                 |
| 14,190.0                      | 88.90           | 177.80      | 11,646.2              | -2,842.9     | 83.6         | 2,843.9                 | 0.74                    | 0.11                   | 0.74                  |
| 14,285.0                      | 89.30           | 179.40      | 11,647.7              | -2,937.9     | 85.9         | 2,938.9                 | 1.74                    | 0.42                   | 1.68                  |
| 14,380.0                      | 89.20           | 178.00      | 11,648.9              | -3,032.8     | 88.1         | 3,033.9                 | 1.48                    | -0.11                  | -1.47                 |
| 14,476.0                      | 89.30           | 180.30      | 11,650.2              | -3,128.8     | 89.5         | 3,129.9                 | 2.40                    | 0.10                   | 2.40                  |
| 14,571.0                      | 89.80           | 180.60      | 11,650.9              | -3,223.8     | 88.8         | 3,224.9                 | 0.61                    | 0.53                   | 0.32                  |
| 14,666.0                      | 89.70           | 179.00      | 11,651.3              | -3,318.8     | 89.1         | 3,319.9                 | 1.69                    | -0.11                  | -1.68                 |
| 14,761.0                      | 89.50           | 181.30      | 11,652.0              | -3,413.8     | 88.8         | 3,414.8                 | 2.43                    | -0.21                  | 2.42                  |
| 14,855.0                      | 89.30           | 181.10      | 11,653.0              | -3,507.8     | 86.9         | 3,508.7                 | 0.30                    | -0.21                  | -0.21                 |
| 14,950.0                      | 89.20           | 179.70      | 11,654.2              | -3,602.7     | 86.2         | 3,603.7                 | 1.48                    | -0.11                  | -1.47                 |
| 15,045.0                      | 88.70           | 181.10      | 11,656.0              | -3,697.7     | 85.5         | 3,698.7                 | 1.56                    | -0.53                  | 1.47                  |
| 15,140.0                      | 88.60           | 179.20      | 11,658.2              | -3,792.7     | 85.3         | 3,793.6                 | 2.00                    | -0.11                  | -2.00                 |
| 15,235.0                      | 88.60           | 180.80      | 11,660.5              | -3,887.7     | 85.3         | 3,888.6                 | 1.68                    | 0.00                   | 1.68                  |
| 15,330.0                      | 88.50           | 179.40      | 11,662.9              | -3,982.6     | 85.1         | 3,983.5                 | 1.48                    | -0.11                  | -1.47                 |
| 15,425.0                      | 88.60           | 178.30      | 11,665.3              | -4,077.6     | 87.0         | 4,078.5                 | 1.16                    | 0.11                   | -1.16                 |
| 15,520.0                      | 88.60           | 178.50      | 11,667.7              | -4,172.5     | 89.7         | 4,173.4                 | 0.21                    | 0.00                   | 0.21                  |
| 15,616.0                      | 89.00           | 178.70      | 11,669.7              | -4,268.5     | 92.0         | 4,269.4                 | 0.47                    | 0.42                   | 0.21                  |
| 15,711.0                      | 89.50           | 177.60      | 11,670.9              | -4,363.4     | 95.1         | 4,364.4                 | 1.27                    | 0.53                   | -1.16                 |
| 15,806.0                      | 89.60           | 178.10      | 11,671.7              | -4,458.3     | 98.7         | 4,459.4                 | 0.54                    | 0.11                   | 0.53                  |
| 15,901.0                      | 89.40           | 177.60      | 11,672.5              | -4,553.3     | 102.2        | 4,554.4                 | 0.57                    | -0.21                  | -0.53                 |
| 15,996.0                      | 88.60           | 177.60      | 11,674.1              | -4,648.2     | 106.2        | 4,649.3                 | 0.84                    | -0.84                  | 0.00                  |
| 16,135.0                      | 90.80           | 176.60      | 11,674.9              | -4,787.0     | 113.2        | 4,788.2                 | 1.74                    | 1.58                   | -0.72                 |
| TD @ 11674' MD / 11674.1' TVD |                 |             |                       |              |              |                         |                         |                        |                       |
| 16,192.0                      | 90.80           | 176.60      | 11,674.1              | -4,843.9     | 116.6        | 4,845.2                 | 0.00                    | 0.00                   | 0.00                  |



DDC  
Survey Report



|                  |                        |                                     |                                        |
|------------------|------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | COG Operating, LLC     | <b>Local Co-ordinate Reference:</b> | Well Corazon State Unit #6H            |
| <b>Project:</b>  | Lea County, NM         | <b>TVD Reference:</b>               | WELL @ 3860.0usft (Original Well Elev) |
| <b>Site:</b>     | Sec 10, T21S, R33E     | <b>MD Reference:</b>                | WELL @ 3860.0usft (Original Well Elev) |
| <b>Well:</b>     | Corazon State Unit #6H | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Wellbore #1            | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Wellbore #1            | <b>Database:</b>                    | EDM 5000.1 Single User Db              |

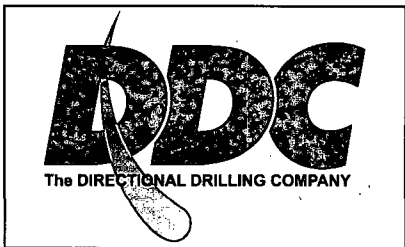
Design Annotations

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                                       |
|-----------------------------|-----------------------------|-------------------|-----------------|-----------------------------------------------|
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                                               |
| 10,960.0                    | 10,959.4                    | -23.0             | 23.5            | TIE IN @ 10960' MD / 10959.4' TVD             |
| 11,549.1                    | 11,487.5                    | -229.8            | 26.8            | CROSSED HARDLINE @ 11549.1' MD / 11487.5' TVD |
| 16,192.0                    | 11,674.1                    | -4,843.9          | 116.6           | TD @ 11674' MD / 11674.1' TVD                 |

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

Company Name: COG Operating, LLC  
 Corazon State Unit #6H  
 Lea County, NM  
 Rig: Original Well Elev  
 Created By: TIFFANI MIZELL  
 Date: 9/12/2013

Corazon State Unit #6H  
 Lea County, NM  
 Q130558 & WT-13650  
 Design #2



| ANNOTATIONS |       |        |         |         |       |        |           |                                               |  |
|-------------|-------|--------|---------|---------|-------|--------|-----------|-----------------------------------------------|--|
| MD          | Inc   | Azi    | TVD     | +N-S    | +E-W  | V-Sect | Departure | Annotation                                    |  |
| 10960.0     | 1.70  | 190.86 | 10959.4 | -23.0   | 23.5  | 23.4   | 103.6     | TIE IN @ 10960' MD / 10959.4' TVD             |  |
| 11549.1     | 49.51 | 176.77 | 11487.5 | -229.8  | 26.8  | 230.3  | 311.1     | CROSSED HARDLINE @ 11549.1' MD / 11487.5' TVD |  |
| 16192.0     | 90.80 | 176.60 | 11674.1 | -4843.9 | 116.6 | 4845.2 | 4926.8    | TD @ 16192' MD / 11674.1' TVD                 |  |

| DESIGN TARGET DETAILS                                      |         |         |      |           |           |                  |                  |
|------------------------------------------------------------|---------|---------|------|-----------|-----------|------------------|------------------|
| Name                                                       | TVD     | +N-S    | +E-W | Northings | Eastings  | Latitude         | Longitude        |
| PBHL - Corazon State Unit #6H<br>- plan site target center | 11680.0 | -4853.1 | 86.5 | 541690.00 | 736214.80 | 32° 29' 12.787 N | 103° 34' 2.176 W |

Azimuths to Grid North

Correction: 6.94°

Magnetic Field Strength: 48576.8snT

Dip Angle: 60.39°

Date: 6/26/2013

Model: IGRF2010

| PROJECT DETAILS: |                                      | Lea County, NM |
|------------------|--------------------------------------|----------------|
| Geodetic System: | US State Plane 1927 (Exact solution) |                |
| Datum:           | NAD 1927 (NADCON CONUS)              |                |
| Ellipsoid:       | Clarke 1866                          |                |
| Zone:            | New Mexico East 3001                 |                |
| System Datum:    | Mean Sea Level                       |                |

| WELL DETAILS: Corazon State Unit #6H |      |           |           |                 |                  |  |
|--------------------------------------|------|-----------|-----------|-----------------|------------------|--|
| Ground Level:                        |      |           |           | 3834.0          |                  |  |
| +N-S                                 | +E-W | Northings | Eastings  | Latitude        | Longitude        |  |
| 0.0                                  | 0.0  | 546543.09 | 736128.30 | 32° 30' 0.815 N | 103° 34' 2.779 W |  |

