

A GYRO TECHNOLOGIES INC. COMPANY

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

April 2, 2014

30 015 42004

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

Attn: Kanicia Castillo

RE: **Arabian 6 Fee 10H**

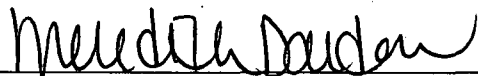
Please find enclosed a copy of the survey from 0.00' to 2176.00' ran on the above referenced well.

Sincerely,

  
Keith Havelka  
Operations

STATE OF TEXAS     §  
                                 §  
COUNTY OF NUECES §

This instrument was acknowledged before me on the 2<sup>nd</sup> day of April,  
A.D., 2014, by Keith Havelka.

  
Meredith Darden  
Notary Public, State of Texas





Company: COG OPERATING , LLC

Lease/Well: ARABIAN 6 FEE /10H

Rig Name: SILVER OAK # 3

State/County: NEW MEXICO /EDDY

Latitude: 32.70, Longitude: -104.43

GRID North is 0.05 Degrees West of True North

VS-Azi: 0.00 Degrees



Depth Reference : R.K.B=17

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ARABIAN 10H.ut

Minimum Curvature Method

Report Date/Time: 4/2/2014 / 13:44

VES Survey International

West Texas

432-563-5444

Surveyor: Javier Estrada

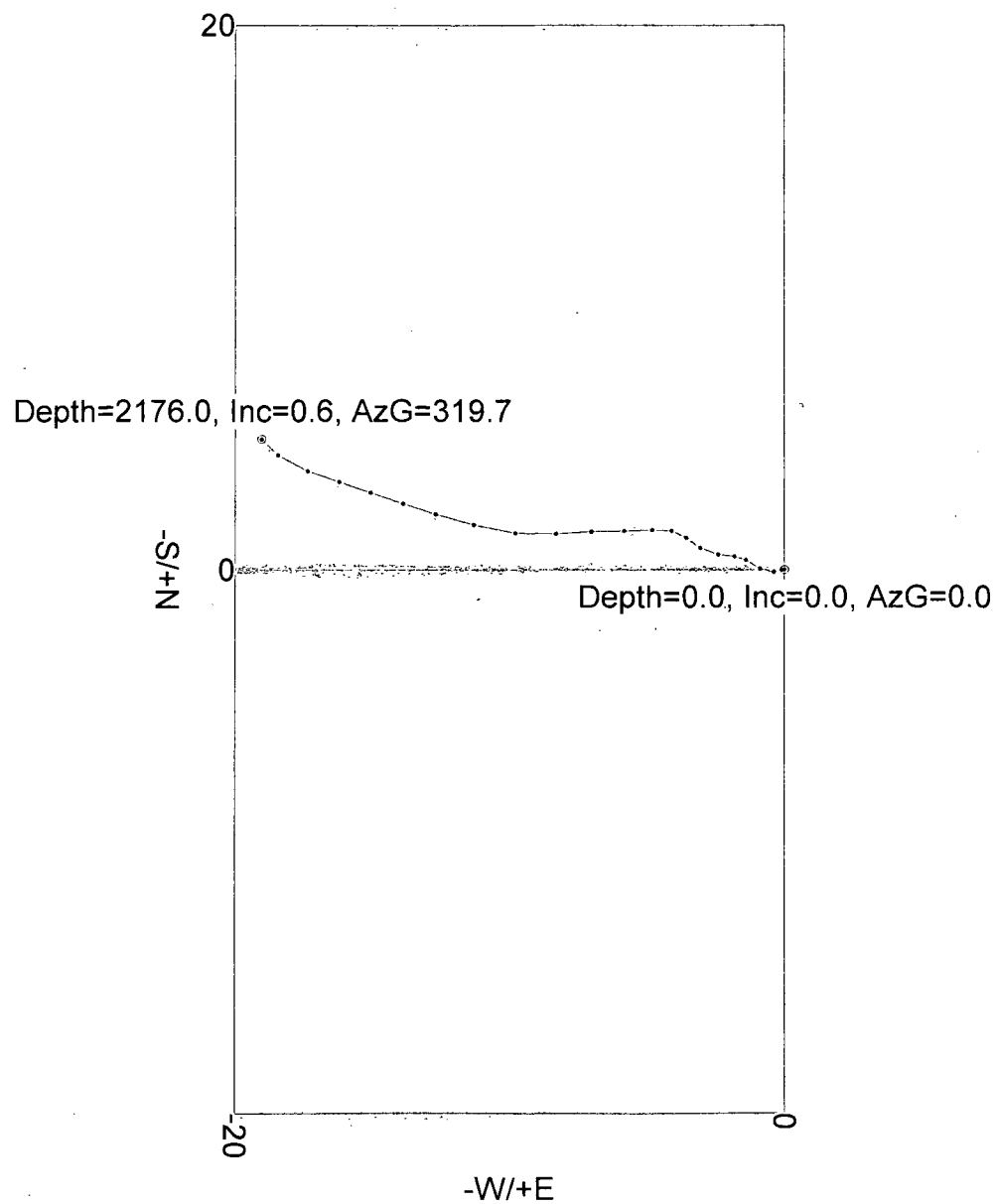
Arabian 6 Fee 10H / API 30-015-42004

| 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                        | ****                          |
| 100.00                  | 0.12                 | 266.64                    | 100.00    | -0.01       | -0.10       | -0.01                     | 0.10                      | 266.64                      | 0.12                          |
| 200.00                  | 0.23                 | 246.23                    | 200.00    | -0.09       | -0.38       | -0.09                     | 0.39                      | 256.59                      | 0.12                          |
| 300.00                  | 0.44                 | 302.49                    | 300.00    | 0.04        | -0.89       | 0.04                      | 0.89                      | 272.31                      | 0.37                          |
| 400.00                  | 0.26                 | 298.95                    | 400.00    | 0.35        | -1.41       | 0.35                      | 1.46                      | 284.06                      | 0.18                          |
| 500.00                  | 0.25                 | 275.68                    | 500.00    | 0.49        | -1.83       | 0.49                      | 1.90                      | 284.89                      | 0.10                          |
| 600.00                  | 0.43                 | 277.27                    | 599.99    | 0.56        | -2.42       | 0.56                      | 2.49                      | 282.94                      | 0.18                          |
| 700.00                  | 0.39                 | 303.68                    | 699.99    | 0.79        | -3.08       | 0.79                      | 3.18                      | 284.46                      | 0.19                          |
| 800.00                  | 0.33                 | 310.34                    | 799.99    | 1.17        | -3.59       | 1.17                      | 3.78                      | 288.10                      | 0.07                          |
| 900.00                  | 0.37                 | 282.36                    | 899.99    | 1.43        | -4.13       | 1.43                      | 4.37                      | 289.11                      | 0.18                          |
| 1000.00                 | 0.43                 | 263.87                    | 999.98    | 1.46        | -4.83       | 1.46                      | 5.04                      | 286.84                      | 0.14                          |
| 1100.00                 | 0.73                 | 269.97                    | 1099.98   | 1.42        | -5.84       | 1.42                      | 6.01                      | 283.66                      | 0.30                          |
| 1200.00                 | 0.62                 | 268.03                    | 1199.97   | 1.40        | -7.03       | 1.40                      | 7.16                      | 281.28                      | 0.11                          |
| 1300.00                 | 0.86                 | 265.26                    | 1299.96   | 1.32        | -8.32       | 1.32                      | 8.42                      | 279.02                      | 0.24                          |
| 1400.00                 | 0.84                 | 277.88                    | 1399.95   | 1.36        | -9.79       | 1.36                      | 9.89                      | 277.90                      | 0.19                          |
| 1500.00                 | 0.92                 | 284.61                    | 1499.94   | 1.66        | -11.30      | 1.66                      | 11.42                     | 278.37                      | 0.13                          |
| 1600.00                 | 0.73                 | 287.82                    | 1599.93   | 2.06        | -12.68      | 2.06                      | 12.84                     | 279.22                      | 0.19                          |
| 1700.00                 | 0.70                 | 288.16                    | 1699.92   | 2.44        | -13.86      | 2.44                      | 14.07                     | 279.99                      | 0.03                          |
| 1800.00                 | 0.74                 | 289.21                    | 1799.91   | 2.85        | -15.05      | 2.85                      | 15.32                     | 280.71                      | 0.04                          |

| 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 |
|-------------------------|----------------------|---------------------------|-----------|-------------|-------------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| 1900.00                 | 0.64                 | 289.39                    | 1899.91   | 3.24        | -16.19      | 3.24                      | 16.51                     | 281.33                      | 0.10                          |
| 2000.00                 | 0.76                 | 288.39                    | 1999.90   | 3.64        | -17.35      | 3.64                      | 17.73                     | 281.85                      | 0.12                          |
| 2100.00                 | 0.68                 | 309.70                    | 2099.89   | 4.23        | -18.44      | 4.23                      | 18.92                     | 282.92                      | 0.28                          |
| 2176.00                 | 0.58                 | 319.70                    | 2175.89   | 4.81        | -19.04      | 4.81                      | 19.64                     | 284.19                      | 0.20                          |



VES Survey International  
West Texas  
432-563-5444  
Surveyor: Javier Estrada  
Arabian 6 Fee 10H / API 30-015-42004



VES Survey Date: 03/23/2014

# **COG Operating LLC**

**Eddy County, NM (NAD27 NME)**

**Arabian 6 Fee**

**#10H**

**WB1/Job #1410329**

**Survey: Phoenix MWD Surveys**

## **Standard Survey Report**

**03 April, 2014**

# Phoenix Technology Services

## Survey Report

|                  |                             |                                     |                                 |
|------------------|-----------------------------|-------------------------------------|---------------------------------|
| <b>Company:</b>  | COG Operating LLC           | <b>Local Co-ordinate Reference:</b> | Well #10H                       |
| <b>Project:</b>  | Eddy County, NM (NAD27 NME) | <b>TVD Reference:</b>               | KB @ 3464.00usft (Silver Oak 3) |
| <b>Site:</b>     | Arabian 6 Fee               | <b>MD Reference:</b>                | KB @ 3464.00usft (Silver Oak 3) |
| <b>Well:</b>     | #10H                        | <b>North Reference:</b>             | Grid                            |
| <b>Wellbore:</b> | WB1/Job #1410329            | <b>Survey Calculation Method:</b>   | Minimum Curvature               |
| <b>Design:</b>   | Surveys (Silver Oak 3)      | <b>Database:</b>                    | GCR DB                          |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Eddy County, NM (NAD27 NME)          |                      |                |
| <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>                  | Arabian 6 Fee |                          |                     |
| <b>Site Position:</b>        |               | <b>Northing:</b>         | 612,084.20 usft     |
| <b>From:</b>                 | Map           | <b>Easting:</b>          | 472,131.70 usft     |
| <b>Position Uncertainty:</b> | 0.00 usft     | <b>Slot Radius:</b>      | 13-3/16 "           |
|                              |               | <b>Latitude:</b>         | 32° 40' 57.67030 N  |
|                              |               | <b>Longitude:</b>        | 104° 25' 26.07641 W |
|                              |               | <b>Grid Convergence:</b> | -0.05 °             |

|                             |           |                            |                                  |
|-----------------------------|-----------|----------------------------|----------------------------------|
| <b>Well</b>                 | #10H      |                            |                                  |
| <b>Well Position</b>        | +N/-S     | 0.00 usft                  | <b>Northing:</b> 617,366.00 usft |
|                             | +E/-W     | 0.00 usft                  | <b>Easting:</b> 470,764.90 usft  |
| <b>Position Uncertainty</b> | 0.00 usft | <b>Wellhead Elevation:</b> | usft                             |
|                             |           | <b>Latitude:</b>           | 32° 41' 49.92520 N               |
|                             |           | <b>Longitude:</b>          | 104° 25' 42.12416 W              |
|                             |           | <b>Ground Level:</b>       | 3,446.00 usft                    |

|                  |                   |                    |                     |
|------------------|-------------------|--------------------|---------------------|
| <b>Wellbore</b>  | WB1/Job #1410329  |                    |                     |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b>  |
|                  | IGRF2010_14       | 01/08/14           | (°)                 |
|                  |                   |                    | 7.70                |
|                  |                   |                    | Dip Angle (°)       |
|                  |                   |                    | 60.41               |
|                  |                   |                    | Field Strength (nT) |
|                  |                   |                    | 48,549              |

|                          |                         |                      |               |
|--------------------------|-------------------------|----------------------|---------------|
| <b>Design</b>            | Surveys (Silver Oak 3)  |                      |               |
| <b>Audit Notes:</b>      |                         |                      |               |
| <b>Version:</b>          | 1.0                     | <b>Phase:</b>        | ACTUAL        |
|                          |                         | <b>Tie On Depth:</b> | 0.00          |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b>         | <b>+E/-W</b>  |
|                          | (usft)                  | (usft)               | (usft)        |
|                          | 0.00                    | 0.00                 | 0.00          |
|                          |                         |                      | Direction (°) |
|                          |                         |                      | 176.82        |

|                       |               |                                      |                         |
|-----------------------|---------------|--------------------------------------|-------------------------|
| <b>Survey Program</b> | Date 04/03/14 |                                      |                         |
| <b>From</b>           | <b>To</b>     | <b>Survey (Wellbore)</b>             | <b>Tool Name</b>        |
| (usft)                | (usft)        |                                      |                         |
| 100.00                | 2,176.00      | VES Gyro Surveys (WB1/Job #1410329)  | VES-ISCWSA-GYRO-3       |
| 2,251.00              | 7,750.00      | Phoenix MWD Surveys (WB1/Job #14103) | MWD                     |
|                       |               |                                      | Description             |
|                       |               |                                      | Biaxial Semi-Cont. Gyro |
|                       |               |                                      | MWD - Standard          |

|                                  |                    |                |                       |              |              |                         |                    |                   |                  |
|----------------------------------|--------------------|----------------|-----------------------|--------------|--------------|-------------------------|--------------------|-------------------|------------------|
| <b>Survey</b>                    |                    |                |                       |              |              |                         |                    |                   |                  |
| <b>Measured Depth</b>            | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical Depth</b> | <b>+N/-S</b> | <b>+E/-W</b> | <b>Vertical Section</b> | <b>Dogleg Rate</b> | <b>Build Rate</b> | <b>Turn Rate</b> |
| (usft)                           | (°)                | (°)            | (usft)                | (usft)       | (usft)       | (usft)                  | (°/100usft)        | (°/100usft)       | (°/100usft)      |
| 2,176.00                         | 0.58               | 319.70         | 2,175.89              | 4.81         | -19.04       | -5.86                   | 0.00               | 0.00              | 0.00             |
| <b>Tie-on to VES Gyro Survey</b> |                    |                |                       |              |              |                         |                    |                   |                  |
| 2,251.00                         | 0.70               | 295.50         | 2,250.88              | 5.30         | -19.70       | -6.38                   | 0.39               | 0.16              | -32.27           |
| <b>First Phoenix MWD Survey</b>  |                    |                |                       |              |              |                         |                    |                   |                  |
| 2,283.00                         | 0.50               | 290.00         | 2,282.88              | 5.43         | -20.01       | -6.53                   | 0.65               | -0.63             | -17.19           |
| 2,314.00                         | 1.70               | 162.00         | 2,313.88              | 5.04         | -19.99       | -6.14                   | 6.60               | 3.87              | -412.90          |
| 2,345.00                         | 6.30               | 159.70         | 2,344.79              | 3.00         | -19.26       | -4.07                   | 14.84              | 14.84             | -7.42            |
| 2,377.00                         | 11.00              | 156.40         | 2,376.42              | -1.44        | -17.43       | 0.47                    | 14.76              | 14.69             | -10.31           |
| 2,408.00                         | 15.30              | 155.00         | 2,406.60              | -7.86        | -14.51       | 7.05                    | 13.91              | 13.87             | -4.52            |

# Phoenix Technology Services

## Survey Report

|           |                             |                              |                                 |
|-----------|-----------------------------|------------------------------|---------------------------------|
| Company:  | COG Operating LLC           | Local Co-ordinate Reference: | Well #10H                       |
| Project:  | Eddy County, NM (NAD27 NME) | TVD Reference:               | KB @ 3464.00usft (Silver Oak 3) |
| Site:     | Arabian 6 Fee               | MD Reference:                | KB @ 3464.00usft (Silver Oak 3) |
| Well:     | #10H                        | North Reference:             | Grid                            |
| Wellbore: | WB1/Job #1410329            | Survey Calculation Method:   | Minimum Curvature               |
| Design:   | Surveys (Silver Oak 3)      | Database:                    | GCR DB                          |

| 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 2,440.00              | 18.80           | 155.40      | 2,437.19              | -16.38       | -10.58       | 15.77                   | 10.94                   | 10.94                  | 1.25                  |
| 2,471.00              | 22.10           | 156.70      | 2,466.23              | -26.28       | -6.19        | 25.90                   | 10.74                   | 10.65                  | 4.19                  |
| 2,502.00              | 26.00           | 158.80      | 2,494.54              | -37.98       | -1.43        | 37.84                   | 12.88                   | 12.58                  | 6.77                  |
| 2,533.00              | 29.00           | 160.00      | 2,522.03              | -51.38       | 3.60         | 51.50                   | 9.84                    | 9.68                   | 3.87                  |
| 2,564.00              | 32.20           | 160.90      | 2,548.71              | -66.25       | 8.87         | 66.84                   | 10.43                   | 10.32                  | 2.90                  |
| 2,595.00              | 35.30           | 161.10      | 2,574.48              | -82.53       | 14.48        | 83.20                   | 10.01                   | 10.00                  | 0.65                  |
| 2,626.00              | 37.50           | 160.90      | 2,599.43              | -99.92       | 20.47        | 100.90                  | 7.11                    | 7.10                   | -0.65                 |
| 2,657.00              | 39.60           | 160.70      | 2,623.68              | -118.16      | 26.82        | 119.47                  | 6.79                    | 6.77                   | -0.65                 |
| 2,689.00              | 42.00           | 160.90      | 2,647.90              | -137.91      | 33.70        | 139.57                  | 7.51                    | 7.50                   | 0.63                  |
| 2,720.00              | 44.30           | 161.60      | 2,670.51              | -157.98      | 40.51        | 159.99                  | 7.58                    | 7.42                   | 2.26                  |
| 2,751.00              | 46.30           | 162.30      | 2,692.32              | -178.93      | 47.34        | 181.28                  | 6.65                    | 6.45                   | 2.26                  |
| 2,782.00              | 47.90           | 163.50      | 2,713.42              | -200.64      | 54.01        | 203.33                  | 5.89                    | 5.16                   | 3.87                  |
| 2,813.00              | 50.50           | 163.90      | 2,733.67              | -223.16      | 60.59        | 226.18                  | 8.44                    | 8.39                   | 1.29                  |
| 2,845.00              | 53.80           | 163.30      | 2,753.31              | -247.40      | 67.73        | 250.77                  | 10.42                   | 10.31                  | -1.88                 |
| 2,876.00              | 56.90           | 162.10      | 2,770.93              | -271.74      | 75.32        | 275.50                  | 10.49                   | 10.00                  | -3.87                 |
| 2,907.00              | 60.00           | 161.50      | 2,787.15              | -296.83      | 83.57        | 301.01                  | 10.14                   | 10.00                  | -1.94                 |
| 2,938.00              | 63.70           | 161.20      | 2,801.77              | -322.72      | 92.31        | 327.35                  | 11.97                   | 11.94                  | -0.97                 |
| 2,969.00              | 66.90           | 161.30      | 2,814.72              | -349.39      | 101.36       | 354.48                  | 10.33                   | 10.32                  | 0.32                  |
| 3,001.00              | 70.30           | 161.40      | 2,826.40              | -377.62      | 110.89       | 383.19                  | 10.63                   | 10.63                  | 0.31                  |
| 3,032.00              | 74.80           | 161.20      | 2,835.69              | -405.62      | 120.37       | 411.67                  | 14.53                   | 14.52                  | -0.65                 |
| 3,063.00              | 79.60           | 160.90      | 2,842.56              | -434.20      | 130.18       | 440.76                  | 15.51                   | 15.48                  | -0.97                 |
| 3,094.00              | 84.20           | 160.90      | 2,846.92              | -463.20      | 140.22       | 470.26                  | 14.84                   | 14.84                  | 0.00                  |
| 3,125.00              | 88.40           | 160.60      | 2,848.92              | -492.40      | 150.42       | 499.98                  | 13.58                   | 13.55                  | -0.97                 |
| 3,156.00              | 91.30           | 160.90      | 2,849.01              | -521.66      | 160.64       | 529.77                  | 9.40                    | 9.35                   | 0.97                  |
| 3,187.00              | 91.50           | 161.30      | 2,848.25              | -550.98      | 170.68       | 559.60                  | 1.44                    | 0.65                   | 1.29                  |
| 3,218.00              | 91.80           | 160.70      | 2,847.36              | -580.28      | 180.76       | 589.41                  | 2.16                    | 0.97                   | -1.94                 |
| 3,239.00              | 91.90           | 160.30      | 2,846.68              | -600.06      | 187.77       | 609.55                  | 1.96                    | 0.48                   | -1.90                 |
| 3,270.00              | 91.90           | 160.20      | 2,845.65              | -629.22      | 198.24       | 639.25                  | 0.32                    | 0.00                   | -0.32                 |
| 3,301.00              | 91.10           | 160.70      | 2,844.84              | -658.43      | 208.61       | 668.98                  | 3.04                    | -2.58                  | 1.61                  |
| 3,331.00              | 90.20           | 161.30      | 2,844.50              | -686.79      | 218.38       | 697.85                  | 3.61                    | -3.00                  | 2.00                  |
| 3,363.00              | 89.40           | 162.20      | 2,844.61              | -717.18      | 228.40       | 728.74                  | 3.76                    | -2.50                  | 2.81                  |
| 3,394.00              | 88.60           | 163.00      | 2,845.15              | -746.75      | 237.67       | 758.79                  | 3.65                    | -2.58                  | 2.58                  |
| 3,425.00              | 88.20           | 163.70      | 2,846.02              | -776.44      | 246.54       | 788.92                  | 2.60                    | -1.29                  | 2.26                  |
| 3,457.00              | 87.40           | 164.50      | 2,847.24              | -807.20      | 255.30       | 820.12                  | 3.53                    | -2.50                  | 2.50                  |
| 3,488.00              | 86.90           | 165.50      | 2,848.79              | -837.10      | 263.32       | 850.42                  | 3.60                    | -1.61                  | 3.23                  |
| 3,519.00              | 86.40           | 166.40      | 2,850.60              | -867.12      | 270.83       | 880.81                  | 3.32                    | -1.61                  | 2.90                  |
| 3,550.00              | 86.20           | 167.60      | 2,852.60              | -897.26      | 277.79       | 911.29                  | 3.92                    | -0.65                  | 3.87                  |
| 3,582.00              | 85.60           | 168.40      | 2,854.89              | -928.48      | 284.43       | 942.83                  | 3.12                    | -1.88                  | 2.50                  |
| 3,613.00              | 85.80           | 169.60      | 2,857.21              | -958.83      | 290.32       | 973.46                  | 3.91                    | 0.65                   | 3.87                  |
| 3,644.00              | 86.50           | 170.80      | 2,859.29              | -989.31      | 295.59       | 1,004.18                | 4.47                    | 2.26                   | 3.87                  |
| 3,675.00              | 87.40           | 171.80      | 2,860.94              | -1,019.91    | 300.27       | 1,034.99                | 4.34                    | 2.90                   | 3.23                  |
| 3,706.00              | 88.10           | 173.00      | 2,862.16              | -1,050.61    | 304.37       | 1,065.88                | 4.48                    | 2.26                   | 3.87                  |
| 3,738.00              | 88.80           | 174.30      | 2,863.02              | -1,082.40    | 307.91       | 1,097.81                | 4.61                    | 2.19                   | 4.06                  |

# Phoenix Technology Services

## Survey Report

|           |                             |                              |                                 |
|-----------|-----------------------------|------------------------------|---------------------------------|
| Company:  | COG Operating LLC           | Local Co-ordinate Reference: | Well #10H                       |
| Project:  | Eddy County, NM (NAD27 NME) | TVD Reference:               | KB @ 3464.00usft (Silver Oak 3) |
| Site:     | Arabian 6 Fee               | MD Reference:                | KB @ 3464.00usft (Silver Oak 3) |
| Well:     | #10H                        | North Reference:             | Grid                            |
| Wellbore: | WB1/Job #1410329            | Survey Calculation Method:   | Minimum Curvature               |
| Design:   | Surveys (Silver Oak 3)      | Database:                    | GCR DB                          |

| 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 3,769.00              | 89.00           | 175.60      | 2,863.62              | -1,113.27    | 310.63       | 1,128.79                | 4.24                    | 0.65                   | 4.19                  |
| 3,800.00              | 88.90           | 176.80      | 2,864.19              | -1,144.20    | 312.69       | 1,159.78                | 3.88                    | -0.32                  | 3.87                  |
| 3,831.00              | 89.50           | 177.90      | 2,864.62              | -1,175.16    | 314.12       | 1,190.78                | 4.04                    | 1.94                   | 3.55                  |
| 3,862.00              | 89.60           | 179.20      | 2,864.86              | -1,206.15    | 314.90       | 1,221.76                | 4.21                    | 0.32                   | 4.19                  |
| 3,893.00              | 90.60           | 180.60      | 2,864.81              | -1,237.15    | 314.96       | 1,252.72                | 5.55                    | 3.23                   | 4.52                  |
| 3,924.00              | 91.60           | 181.90      | 2,864.21              | -1,268.14    | 314.28       | 1,283.62                | 5.29                    | 3.23                   | 4.19                  |
| 4,018.00              | 91.80           | 182.80      | 2,861.43              | -1,362.02    | 310.43       | 1,377.14                | 0.98                    | 0.21                   | 0.96                  |
| 4,110.00              | 91.90           | 182.60      | 2,858.46              | -1,453.86    | 306.10       | 1,468.61                | 0.24                    | 0.11                   | -0.22                 |
| 4,204.00              | 91.30           | 181.90      | 2,855.83              | -1,547.75    | 302.41       | 1,562.15                | 0.98                    | -0.64                  | -0.74                 |
| 4,297.00              | 91.40           | 180.70      | 2,853.64              | -1,640.70    | 300.30       | 1,654.84                | 1.29                    | 0.11                   | -1.29                 |
| 4,391.00              | 91.90           | 180.50      | 2,850.93              | -1,734.66    | 299.32       | 1,748.59                | 0.57                    | 0.53                   | -0.21                 |
| 4,484.00              | 89.40           | 179.60      | 2,849.88              | -1,827.64    | 299.24       | 1,841.43                | 2.86                    | -2.69                  | -0.97                 |
| 4,576.00              | 90.40           | 179.60      | 2,850.04              | -1,919.64    | 299.88       | 1,933.32                | 1.09                    | 1.09                   | 0.00                  |
| 4,670.00              | 90.30           | 179.30      | 2,849.46              | -2,013.63    | 300.78       | 2,027.22                | 0.34                    | -0.11                  | -0.32                 |
| 4,763.00              | 89.60           | 179.00      | 2,849.55              | -2,106.62    | 302.16       | 2,120.14                | 0.82                    | -0.75                  | -0.32                 |
| 4,856.00              | 89.00           | 179.40      | 2,850.68              | -2,199.61    | 303.46       | 2,213.05                | 0.78                    | -0.65                  | 0.43                  |
| 4,951.00              | 88.30           | 179.70      | 2,852.92              | -2,294.58    | 304.20       | 2,307.92                | 0.80                    | -0.74                  | 0.32                  |
| 5,045.00              | 89.40           | 179.50      | 2,854.81              | -2,388.55    | 304.86       | 2,401.79                | 1.19                    | 1.17                   | -0.21                 |
| 5,139.00              | 89.30           | 179.70      | 2,855.87              | -2,482.55    | 305.52       | 2,495.67                | 0.24                    | -0.11                  | 0.21                  |
| 5,232.00              | 88.70           | 180.50      | 2,857.50              | -2,575.53    | 305.35       | 2,588.50                | 1.08                    | -0.65                  | 0.86                  |
| 5,326.00              | 88.70           | 181.90      | 2,859.63              | -2,669.48    | 303.39       | 2,682.20                | 1.49                    | 0.00                   | 1.49                  |
| 5,420.00              | 89.50           | 182.50      | 2,861.11              | -2,763.40    | 299.78       | 2,775.78                | 1.06                    | 0.85                   | 0.64                  |
| 5,513.00              | 90.10           | 182.10      | 2,861.43              | -2,856.33    | 296.05       | 2,868.35                | 0.78                    | 0.65                   | -0.43                 |
| 5,608.00              | 89.50           | 181.10      | 2,861.76              | -2,951.29    | 293.39       | 2,963.02                | 1.23                    | -0.63                  | -1.05                 |
| 5,702.00              | 88.90           | 179.50      | 2,863.07              | -3,045.27    | 292.90       | 3,056.83                | 1.82                    | -0.64                  | -1.70                 |
| 5,796.00              | 89.90           | 179.30      | 2,864.06              | -3,139.26    | 293.89       | 3,150.73                | 1.08                    | 1.06                   | -0.21                 |
| 5,889.00              | 90.20           | 179.40      | 2,863.98              | -3,232.25    | 294.94       | 3,243.64                | 0.34                    | 0.32                   | 0.11                  |
| 5,982.00              | 89.50           | 179.80      | 2,864.22              | -3,325.25    | 295.59       | 3,336.53                | 0.87                    | -0.75                  | 0.43                  |
| 6,076.00              | 89.80           | 180.20      | 2,864.80              | -3,419.25    | 295.59       | 3,430.38                | 0.53                    | 0.32                   | 0.43                  |
| 6,170.00              | 89.80           | 180.80      | 2,865.12              | -3,513.24    | 294.77       | 3,524.19                | 0.64                    | 0.00                   | 0.64                  |
| 6,263.00              | 90.40           | 181.10      | 2,864.96              | -3,606.23    | 293.23       | 3,616.94                | 0.72                    | 0.65                   | 0.32                  |
| 6,357.00              | 90.10           | 181.20      | 2,864.55              | -3,700.21    | 291.34       | 3,710.68                | 0.34                    | -0.32                  | 0.11                  |
| 6,450.00              | 90.90           | 180.50      | 2,863.74              | -3,793.20    | 289.96       | 3,803.44                | 1.14                    | 0.86                   | -0.75                 |
| 6,543.00              | 89.80           | 180.00      | 2,863.17              | -3,886.19    | 289.56       | 3,896.27                | 1.30                    | -1.18                  | -0.54                 |
| 6,637.00              | 89.50           | 179.80      | 2,863.75              | -3,980.19    | 289.72       | 3,990.13                | 0.38                    | -0.32                  | -0.21                 |
| 6,730.00              | 89.70           | 179.80      | 2,864.39              | -4,073.19    | 290.04       | 4,083.00                | 0.22                    | 0.22                   | 0.00                  |
| 6,824.00              | 88.80           | 179.80      | 2,865.63              | -4,167.18    | 290.37       | 4,176.87                | 0.96                    | -0.96                  | 0.00                  |
| 6,918.00              | 88.60           | 179.90      | 2,867.76              | -4,261.15    | 290.62       | 4,270.71                | 0.24                    | -0.21                  | 0.11                  |
| 7,011.00              | 89.60           | 179.60      | 2,869.22              | -4,354.14    | 291.02       | 4,363.58                | 1.12                    | 1.08                   | -0.32                 |
| 7,104.00              | 90.30           | 180.30      | 2,869.30              | -4,447.14    | 291.11       | 4,456.44                | 1.06                    | 0.75                   | 0.75                  |
| 7,198.00              | 90.40           | 181.00      | 2,868.73              | -4,541.13    | 290.04       | 4,550.23                | 0.75                    | 0.11                   | 0.74                  |
| 7,293.00              | 89.90           | 181.00      | 2,868.48              | -4,636.11    | 288.38       | 4,644.97                | 0.53                    | -0.53                  | 0.00                  |
| 7,387.00              | 89.10           | 181.30      | 2,869.30              | -4,730.09    | 286.49       | 4,738.70                | 0.91                    | -0.85                  | 0.32                  |
| 7,481.00              | 89.50           | 181.50      | 2,870.45              | -4,824.06    | 284.20       | 4,832.39                | 0.48                    | 0.43                   | 0.21                  |

# Phoenix Technology Services

## Survey Report

|           |                             |                              |                                 |
|-----------|-----------------------------|------------------------------|---------------------------------|
| Company:  | COG Operating LLC           | Local Co-ordinate Reference: | Well #10H                       |
| Project:  | Eddy County, NM (NAD27 NME) | TVD Reference:               | KB @ 3464.00usft (Silver Oak 3) |
| Site:     | Arabian 6 Fee               | MD Reference:                | KB @ 3464.00usft (Silver Oak 3) |
| Well:     | #10H                        | North Reference:             | Grid                            |
| Wellbore: | WB1/Job #1410329            | Survey Calculation Method:   | Minimum Curvature               |
| Design:   | Surveys (Silver Oak 3)      | Database:                    | GCR DB                          |

| 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) |
|-------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 7,575.00                | 88.40           | 179.60      | 2,872.17              | -4,918.03    | 283.30       | 4,926.17                | 2.34                    | -1.17                  | -2.02                 |
| 7,668.00                | 89.10           | 179.40      | 2,874.20              | -5,011.00    | 284.11       | 5,019.05                | 0.78                    | 0.75                   | -0.22                 |
| 7,688.00                | 89.40           | 179.60      | 2,874.46              | -5,031.00    | 284.28       | 5,039.02                | 1.80                    | 1.50                   | 1.00                  |
| Last Phoenix MWD Survey |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,750.00                | 89.40           | 179.60      | 2,875.11              | -5,093.00    | 284.71       | 5,100.95                | 0.00                    | 0.00                   | 0.00                  |
| Projection to TD        |                 |             |                       |              |              |                         |                         |                        |                       |

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                   |
|-----------------------|-----------------------|-------------------|--------------|---------------------------|
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                           |
| 2,176.00              | 2,175.89              | 4.81              | -19.04       | Tie-on to VES Gyro Survey |
| 2,251.00              | 2,250.88              | 5.30              | -19.70       | First Phoenix MWD Survey  |
| 7,688.00              | 2,874.46              | -5,031.00         | 284.28       | Last Phoenix MWD Survey   |
| 7,750.00              | 2,875.11              | -5,093.00         | 284.71       | Projection to TD          |

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

ID: 30-015-42004

Well Name: ARABIAN 6 FEE #10H

Event#: 2

Report Dates: 05/17/2014

## PIPE SPECIFICATION

| STRING NAME | SECTION NAME | JOINT COUNT | START DEPTH | END DEPTH | LENGTH  | OD SIZE | ID SIZE | WT GRDNT | GRD  | CONN |
|-------------|--------------|-------------|-------------|-----------|---------|---------|---------|----------|------|------|
| SURFACE     | FLOAT SHOE   |             | 1230.50     | 1232.00   | 1.50    |         |         |          |      | LTC  |
| SURFACE     | CASING       | 1           | 1186.37     | 1230.50   | 44.13   | 8.63    | 7.92    | 32.0     | J-55 | LTC  |
| SURFACE     | FLOAT COLLAR |             | 1184.87     | 1186.37   | 1.50    |         |         |          |      | LTC  |
| SURFACE     | CASING       | 27          | -3.47       | 1184.87   | 1188.34 | 8.63    | 7.92    | 32.0     | J-55 | LTC  |
| PRODUCTION  |              |             | 7747.20     | 7750.00   | 2.80    |         |         |          |      |      |
| PRODUCTION  | CASING       | 127         | 2227.07     | 7747.20   | 5520.13 |         |         |          |      |      |
| PRODUCTION  | MARKER JOINT | 1           | 2212.07     | 2227.07   | 15.00   |         |         |          |      |      |
| PRODUCTION  | CASING       | 50          | 21.01       | 2212.07   | 2191.06 |         |         |          |      |      |

## CEMENTING

| STRING NAME | STAGE # | LEAD TOP (est) (ft) | LEAD TOP (ver) (ft) | TAIL TOP (est) (ft) | TAIL TOP (ver) (ft) |
|-------------|---------|---------------------|---------------------|---------------------|---------------------|
| SURFACE     | 1       | 0.0                 | 0.0                 |                     |                     |
| SURFACE     | 2       |                     |                     |                     |                     |
| SURFACE     | 3       |                     |                     |                     |                     |
| PRODUCTION  | 1       | 0.0                 | 0.0                 |                     |                     |

## BHA STRING

| DRILL EQUIP CODE | DESCRIPTION | LENGTH | OD SIZE | ID SIZE |
|------------------|-------------|--------|---------|---------|
|------------------|-------------|--------|---------|---------|

## PERFORATION

| ZONE | JOB REPORT DATE | ZONE NAME | TOP DEPTH | BOTTOM DEPTH | HOLE SIZE | PEN SIZE | SQUEEZED |
|------|-----------------|-----------|-----------|--------------|-----------|----------|----------|
| 1    | 05/06/2014      | PADDOCK   | 5496.00   | 5499.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 5652.00   | 5655.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 5808.00   | 5811.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 5964.00   | 5967.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 6120.00   | 6123.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 6276.00   | 6279.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 6432.00   | 6435.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 6588.00   | 6591.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 6744.00   | 6747.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 6900.00   | 6903.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 7056.00   | 7059.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 7212.00   | 7215.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 7368.00   | 7369.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 7524.00   | 7526.00      | 0.43      | 23.54    | N        |
| 1    | 05/06/2014      | PADDOCK   | 7680.00   | 7682.00      | 0.43      | 23.54    | N        |

