

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S St Francis Dr, Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144 CLEZ  
July 21, 2008

For closed-loop systems that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, submit to the appropriate NMOCD District Office.

### Closed-Loop System Permit or Closure Plan Application

(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

Type of action: ☒ Permit ☐ Closure

Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.  
Operator: COG OPERATING LLC OGRID #: 229137  
Address: 550 WEST TEXAS, SUITE 100 MIDLAND, TX 79701  
Facility or well name: PINTO "36" FEE #3H  
API Number: 30-015- 39782 OCD Permit Number: 212308  
U/L or Qtr/Qtr UL B Section 36 Township 18S Range 25E County: Eddy  
Center of Proposed Design: Latitude N/A Longitude N/A NAD: ☐ 1927 ☐ 1983  
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.  
☒ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC  
Operation: ☒ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) ☐ P&A  
☐ Above Ground Steel Tanks or ☒ Haul-off Bins

3.  
**Signs:** Subsection C of 19.15.17.11 NMAC  
☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers  
☒ Signed in compliance with 19.15.3.103 NMAC

4.  
**Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC  
**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☒ Closure Plan (Please complete Box 5) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC  
☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_  
☐ Previously Approved Operating and Maintenance Plan API Number: \_\_\_\_\_

5.  
**Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)  
**Instructions:** Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.  
Disposal Facility Name: CRI Disposal Facility Permit Number: R1966  
Disposal Facility Name: GM INC Disposal Facility Permit Number: 711-019-001  
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations?  
☐ Yes (If yes, please provide the information below) ☒ No  
**Required for impacted areas which will not be used for future service and operations:**  
☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

**Operator Application Certification:**  
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.  
Name (Print): KELLY J. HOLLY Title: PERMITTING TECH  
Signature: [Signature] Date: 11/21/2011  
e-mail address: kholly@concho.com Telephone: 432-685-4384

7. **OCD Approval:** ☒ Permit Application (including closure plan) ☐ Closure Plan (only)

OCD Representative Signature: [Signature] Approval Date: 12/21/2011

Title: DIST # Supervisor OCD Permit Number: 212308

8. **Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC

*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*

☐ Closure Completion Date: \_\_\_\_\_

9. **Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**

*Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.*

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

*Required for impacted areas which will not be used for future service and operations:*

☐ Site Reclamation (Photo Documentation)

☐ Soil Backfilling and Cover Installation

☐ Re-vegetation Application Rates and Seeding Technique

10. **Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

All drilling fluid circulated over shaker(s) with cuttings discharged into roll off container.

Fluid and fines below shaker(s) are circulated with transfer pump through centrifuge(s) or solids separator with cuttings and fines discharged into roll off container.

Fluid is continuously re-circulated through equipment with polymer added to aid separation of cutting fines.

Roll off containers are lined and de-watered with fluids re-circulated into system.

Additional tank is used to capture unused drilling fluid or cement returns from casing jobs.

This equipment will be maintained 24 hrs./day by solids control personnel and or rig crews that stay on location.

Cuttings will be hauled to either:

CRI (permit number R9166)

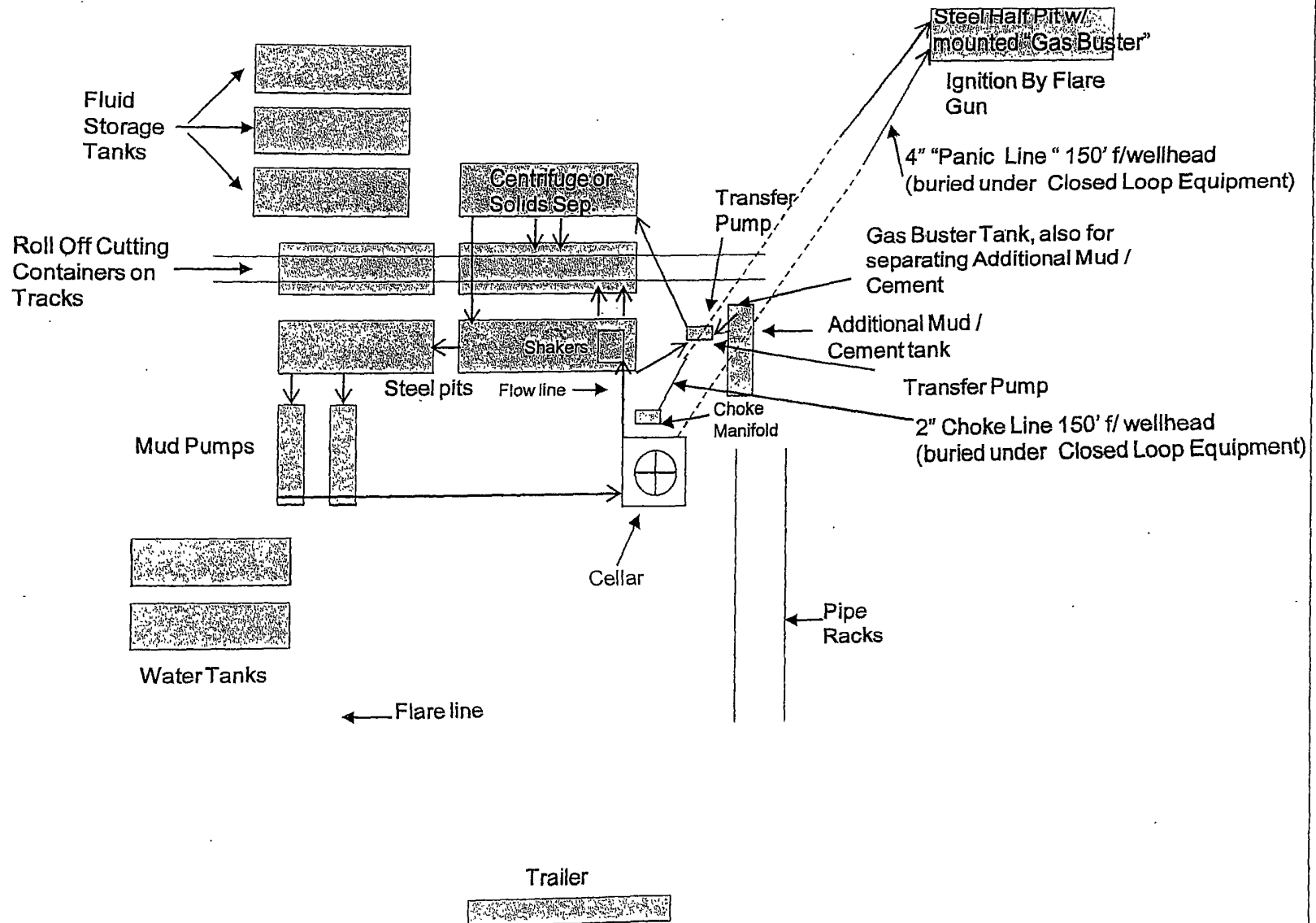
or

GMI (permit number 711-019-001)

dependent upon which rig is available to drill this well.

# COG Operating LLC

## Closed Loop Equipment Diagram





## **COG Operating LLC**

Eddy County, NM (NAN27 NME)

Pinto 36 State Com #3H

Pinto 36 State Com #3H

OH

Plan: Plan #1 8-3/4" Hole

SHL = 150' FSL & 2260' FEL

PP = 330' FSL & 2260' FEL

BHL = 330' FNL & 2260' FEL

## **Standard Planning Report**

13 December, 2011





SDI  
Planning Report



|           |                             |                              |                             |
|-----------|-----------------------------|------------------------------|-----------------------------|
| Database: | EDM 5000 1 Single User Db   | Local Co-ordinate Reference: | Site Pinto 36 State Com #3H |
| Company:  | COG Operating LLC           | TVD Reference:               | GL Elev @ 3465 00usft       |
| Project:  | Eddy County, NM (NAN27 NME) | MD Reference:                | GL Elev @ 3465.00usft       |
| Site:     | Pinto 36 State Com #3H      | North Reference:             | Grid                        |
| Well:     | Pinto 36 State Com #3H      | Survey Calculation Method:   | Minimum Curvature           |
| Wellbore: | OH                          |                              |                             |
| Design:   | Plan #1 8-3/4" Hole         |                              |                             |

|             |                                      |               |                |
|-------------|--------------------------------------|---------------|----------------|
| Project     | Eddy County, NM (NAN27 NME)          |               |                |
| Map System: | US State Plane 1927 (Exact solution) | System Datum: | Mean Sea Level |
| Geo Datum:  | NAD 1927 (NADCON CONUS)              |               |                |
| Map Zone:   | New Mexico East 3001                 |               |                |

|                       |                        |                   |                   |
|-----------------------|------------------------|-------------------|-------------------|
| Site                  | Pinto 36 State Com #3H |                   |                   |
| Site Position:        |                        | Northing:         | 622,400 20 usft   |
| From:                 | Map                    | Easting:          | 468,309 20 usft   |
| Position Uncertainty: | 0 00 usft              | Slot Radius:      | 13-3/16 "         |
|                       |                        | Latitude:         | 32° 42' 39 719 N  |
|                       |                        | Longitude:        | 104° 26' 10 919 W |
|                       |                        | Grid Convergence: | -0.06 °           |

|                      |                        |                     |               |
|----------------------|------------------------|---------------------|---------------|
| Well                 | Pinto 36 State Com #3H |                     |               |
| Well Position        | +N/-S                  | 0 00 usft           | Northing:     |
|                      | +E/-W                  | 0.00 usft           | Easting:      |
| Position Uncertainty | 0 00 usft              | Wellhead Elevation: | Ground Level: |
|                      |                        |                     | 3,465 00 usft |

|           |            |             |                |
|-----------|------------|-------------|----------------|
| Wellbore  | OH         |             |                |
| Magnetics | Model Name | Sample Date | Declination    |
|           |            |             | (°)            |
|           | IGRF2010   | 2011/12/12  | 7 96           |
|           |            |             | Dip Angle      |
|           |            |             | (°)            |
|           |            |             | 60 47          |
|           |            |             | Field Strength |
|           |            |             | (nT)           |
|           |            |             | 48,762         |

|                   |                     |        |               |
|-------------------|---------------------|--------|---------------|
| Design            | Plan #1 8-3/4" Hole |        |               |
| Audit Notes:      |                     |        |               |
| Version:          | Phase:              | PLAN   | Tie On Depth: |
|                   |                     |        | 0 00          |
| Vertical Section: | Depth From (TVD)    | +N/-S  | +E/-W         |
|                   | (usft)              | (usft) | (usft)        |
|                   | 0 00                | 0 00   | 0 00          |
|                   |                     |        | Direction:    |
|                   |                     |        | (°)           |
|                   |                     |        | 180 16        |

| Plan Sections         |                 |             |                       |              |              |                         |                        |                       |         |                   |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|---------|-------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target            |
| 0 00                  | 0 00            | 0 00        | 0 00                  | 0 00         | 0 00         | 0 00                    | 0 00                   | 0 00                  | 0 00    |                   |
| 2,272 54              | 0 00            | 0 00        | 2,272 54              | 0 00         | 0 00         | 0 00                    | 0 00                   | 0 00                  | 0 00    |                   |
| 3,022 54              | 90 00           | 180 16      | 2,750 00              | -477 46      | -1 30        | 12 00                   | 12 00                  | 0 00                  | 180 16  |                   |
| 7,349 29              | 90 00           | 180 16      | 2,750.00              | -4,804 20    | -13 10       | 0 00                    | 0 00                   | 0 00                  | 0 00    | PBHL-Pinto 36 #3H |



SDI  
Planning Report



|           |                             |                              |                             |
|-----------|-----------------------------|------------------------------|-----------------------------|
| Database: | EDM 5000 1 Single User Db   | Local Co-ordinate Reference: | Site Pinto 36 State Com #3H |
| Company:  | COG Operating LLC           | TVD Reference:               | GL Elev @ 3465.00usft       |
| Project:  | Eddy County, NM (NAN27 NME) | MD Reference:                | GL Elev @ 3465.00usft       |
| Site:     | Pinto 36 State Com #3H      | North Reference:             | Grid                        |
| Well:     | Pinto 36 State Com #3H      | Survey Calculation Method:   | Minimum Curvature           |
| Wellbore: | OH                          |                              |                             |
| Design:   | Plan #1 8-3/4" Hole         |                              |                             |

| Planned 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) |
| 0.00                        | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,272.54                    | 0.00            | 0.00        | 2,272.54              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| KOP Start Build 12.00°/100' |                 |             |                       |              |              |                         |                         |                        |                       |
| 2,300.00                    | 3.30            | 180.16      | 2,299.98              | -0.79        | 0.00         | 0.79                    | 12.00                   | 12.00                  | 0.00                  |
| 2,400.00                    | 15.30           | 180.16      | 2,398.49              | -16.91       | -0.05        | 16.91                   | 12.00                   | 12.00                  | 0.00                  |
| 2,500.00                    | 27.30           | 180.16      | 2,491.49              | -53.17       | -0.14        | 53.17                   | 12.00                   | 12.00                  | 0.00                  |
| 2,600.00                    | 39.30           | 180.16      | 2,574.93              | -107.96      | -0.29        | 107.96                  | 12.00                   | 12.00                  | 0.00                  |
| 2,700.00                    | 51.30           | 180.16      | 2,645.14              | -178.91      | -0.49        | 178.91                  | 12.00                   | 12.00                  | 0.00                  |
| 2,701.40                    | 51.46           | 180.16      | 2,646.01              | -180.00      | -0.49        | 180.00                  | 12.00                   | 12.00                  | 0.00                  |
| PP=330° FNL Pinto 36 #3H    |                 |             |                       |              |              |                         |                         |                        |                       |
| 2,800.00                    | 63.30           | 180.16      | 2,699.07              | -262.90      | -0.72        | 262.90                  | 12.00                   | 12.00                  | 0.00                  |
| 2,900.00                    | 75.30           | 180.16      | 2,734.36              | -356.27      | -0.97        | 356.27                  | 12.00                   | 12.00                  | 0.00                  |
| 3,000.00                    | 87.30           | 180.16      | 2,749.47              | -454.94      | -1.24        | 454.94                  | 12.00                   | 12.00                  | 0.00                  |
| 3,022.54                    | 90.00           | 180.16      | 2,750.00              | -477.47      | -1.30        | 477.47                  | 12.00                   | 12.00                  | 0.00                  |
| Land EOC hold 90.00°        |                 |             |                       |              |              |                         |                         |                        |                       |
| 3,100.00                    | 90.00           | 180.16      | 2,750.00              | -554.93      | -1.51        | 554.93                  | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00                    | 90.00           | 180.16      | 2,750.00              | -654.93      | -1.79        | 654.93                  | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00                    | 90.00           | 180.16      | 2,750.00              | -754.93      | -2.06        | 754.93                  | 0.00                    | 0.00                   | 0.00                  |
| 3,400.00                    | 90.00           | 180.16      | 2,750.00              | -854.93      | -2.33        | 854.93                  | 0.00                    | 0.00                   | 0.00                  |
| 3,500.00                    | 90.00           | 180.16      | 2,750.00              | -954.93      | -2.60        | 954.93                  | 0.00                    | 0.00                   | 0.00                  |
| 3,600.00                    | 90.00           | 180.16      | 2,750.00              | -1,054.93    | -2.88        | 1,054.93                | 0.00                    | 0.00                   | 0.00                  |
| 3,700.00                    | 90.00           | 180.16      | 2,750.00              | -1,154.93    | -3.15        | 1,154.93                | 0.00                    | 0.00                   | 0.00                  |
| 3,800.00                    | 90.00           | 180.16      | 2,750.00              | -1,254.93    | -3.42        | 1,254.93                | 0.00                    | 0.00                   | 0.00                  |
| 3,900.00                    | 90.00           | 180.16      | 2,750.00              | -1,354.92    | -3.69        | 1,354.93                | 0.00                    | 0.00                   | 0.00                  |
| 4,000.00                    | 90.00           | 180.16      | 2,750.00              | -1,454.92    | -3.97        | 1,454.93                | 0.00                    | 0.00                   | 0.00                  |
| 4,100.00                    | 90.00           | 180.16      | 2,750.00              | -1,554.92    | -4.24        | 1,554.93                | 0.00                    | 0.00                   | 0.00                  |
| 4,200.00                    | 90.00           | 180.16      | 2,750.00              | -1,654.92    | -4.51        | 1,654.93                | 0.00                    | 0.00                   | 0.00                  |
| 4,300.00                    | 90.00           | 180.16      | 2,750.00              | -1,754.92    | -4.79        | 1,754.93                | 0.00                    | 0.00                   | 0.00                  |
| 4,400.00                    | 90.00           | 180.16      | 2,750.00              | -1,854.92    | -5.06        | 1,854.93                | 0.00                    | 0.00                   | 0.00                  |
| 4,500.00                    | 90.00           | 180.16      | 2,750.00              | -1,954.92    | -5.33        | 1,954.93                | 0.00                    | 0.00                   | 0.00                  |
| 4,600.00                    | 90.00           | 180.16      | 2,750.00              | -2,054.92    | -5.60        | 2,054.93                | 0.00                    | 0.00                   | 0.00                  |
| 4,700.00                    | 90.00           | 180.16      | 2,750.00              | -2,154.92    | -5.88        | 2,154.93                | 0.00                    | 0.00                   | 0.00                  |
| 4,800.00                    | 90.00           | 180.16      | 2,750.00              | -2,254.92    | -6.15        | 2,254.93                | 0.00                    | 0.00                   | 0.00                  |
| 4,900.00                    | 90.00           | 180.16      | 2,750.00              | -2,354.92    | -6.42        | 2,354.93                | 0.00                    | 0.00                   | 0.00                  |
| 5,000.00                    | 90.00           | 180.16      | 2,750.00              | -2,454.92    | -6.69        | 2,454.93                | 0.00                    | 0.00                   | 0.00                  |
| 5,100.00                    | 90.00           | 180.16      | 2,750.00              | -2,554.92    | -6.97        | 2,554.93                | 0.00                    | 0.00                   | 0.00                  |
| 5,200.00                    | 90.00           | 180.16      | 2,750.00              | -2,654.92    | -7.24        | 2,654.93                | 0.00                    | 0.00                   | 0.00                  |
| 5,300.00                    | 90.00           | 180.16      | 2,750.00              | -2,754.92    | -7.51        | 2,754.93                | 0.00                    | 0.00                   | 0.00                  |
| 5,400.00                    | 90.00           | 180.16      | 2,750.00              | -2,854.92    | -7.78        | 2,854.93                | 0.00                    | 0.00                   | 0.00                  |
| 5,500.00                    | 90.00           | 180.16      | 2,750.00              | -2,954.92    | -8.06        | 2,954.93                | 0.00                    | 0.00                   | 0.00                  |
| 5,600.00                    | 90.00           | 180.16      | 2,750.00              | -3,054.92    | -8.33        | 3,054.93                | 0.00                    | 0.00                   | 0.00                  |
| 5,700.00                    | 90.00           | 180.16      | 2,750.00              | -3,154.92    | -8.60        | 3,154.93                | 0.00                    | 0.00                   | 0.00                  |
| 5,800.00                    | 90.00           | 180.16      | 2,750.00              | -3,254.92    | -8.88        | 3,254.93                | 0.00                    | 0.00                   | 0.00                  |
| 5,900.00                    | 90.00           | 180.16      | 2,750.00              | -3,354.92    | -9.15        | 3,354.93                | 0.00                    | 0.00                   | 0.00                  |
| 6,000.00                    | 90.00           | 180.16      | 2,750.00              | -3,454.92    | -9.42        | 3,454.93                | 0.00                    | 0.00                   | 0.00                  |
| 6,100.00                    | 90.00           | 180.16      | 2,750.00              | -3,554.92    | -9.69        | 3,554.93                | 0.00                    | 0.00                   | 0.00                  |
| 6,200.00                    | 90.00           | 180.16      | 2,750.00              | -3,654.92    | -9.97        | 3,654.93                | 0.00                    | 0.00                   | 0.00                  |
| 6,300.00                    | 90.00           | 180.16      | 2,750.00              | -3,754.92    | -10.24       | 3,754.93                | 0.00                    | 0.00                   | 0.00                  |
| 6,400.00                    | 90.00           | 180.16      | 2,750.00              | -3,854.92    | -10.51       | 3,854.93                | 0.00                    | 0.00                   | 0.00                  |
| 6,500.00                    | 90.00           | 180.16      | 2,750.00              | -3,954.92    | -10.78       | 3,954.93                | 0.00                    | 0.00                   | 0.00                  |
| 6,600.00                    | 90.00           | 180.16      | 2,750.00              | -4,054.91    | -11.06       | 4,054.93                | 0.00                    | 0.00                   | 0.00                  |
| 6,700.00                    | 90.00           | 180.16      | 2,750.00              | -4,154.91    | -11.33       | 4,154.93                | 0.00                    | 0.00                   | 0.00                  |
| 6,800.00                    | 90.00           | 180.16      | 2,750.00              | -4,254.91    | -11.60       | 4,254.93                | 0.00                    | 0.00                   | 0.00                  |



SDI  
Planning Report



|           |                             |                              |                             |
|-----------|-----------------------------|------------------------------|-----------------------------|
| Database: | EDM 5000 1 Single User Db   | Local Co-ordinate Reference: | Site Pinto 36 State Com #3H |
| Company:  | COG Operating LLC           | TVD Reference:               | GL Elev @ 3465 00usft       |
| Project:  | Eddy County, NM (NAN27 NME) | MD Reference:                | GL Elev @ 3465 00usft       |
| Site:     | Pinto 36 State Com #3H      | North Reference:             | Grid                        |
| Well:     | Pinto 36 State Com #3H      | Survey Calculation Method:   | Minimum Curvature           |
| Wellbore: | OH                          |                              |                             |
| Design:   | Plan #1 8-3/4" Hole         |                              |                             |

Planned 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 6,900 00              | 90 00           | 180 16      | 2,750 00              | -4,354 91    | -11 87       | 4,354 93                | 0 00                    | 0 00                   | 0 00                  |
| 7,000 00              | 90 00           | 180 16      | 2,750 00              | -4,454 91    | -12 15       | 4,454 93                | 0 00                    | 0 00                   | 0 00                  |
| 7,100 00              | 90 00           | 180 16      | 2,750 00              | -4,554 91    | -12 42       | 4,554 93                | 0 00                    | 0 00                   | 0 00                  |
| 7,200 00              | 90 00           | 180 16      | 2,750 00              | -4,654 91    | -12 69       | 4,654 93                | 0 00                    | 0 00                   | 0 00                  |
| 7,300 00              | 90 00           | 180 16      | 2,750 00              | -4,754 91    | -12 97       | 4,754 93                | 0 00                    | 0 00                   | 0 00                  |
| 7,349 29              | 90 00           | 180 16      | 2,750 00              | -4,804 20    | -13 10       | 4,804 22                | 0 00                    | 0 00                   | 0 00                  |
| PBHL-Pinto 36 #3H     |                 |             |                       |              |              |                         |                         |                        |                       |

Design Targets

| Target Name               | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude         | Longitude         |
|---------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|-------------------|
| - hit/miss target         |               |              |            |              |              |                 |                |                  |                   |
| - Shape                   |               |              |            |              |              |                 |                |                  |                   |
| PP=330' FNL Pinto 36 #    | 0 00          | 0 00         | 2,646 02   | -180 00      | -0 49        | 622,220 20      | 468,308 71     | 32° 42' 37.938 N | 104° 26' 10.923 W |
| - plan hits target center |               |              |            |              |              |                 |                |                  |                   |
| - Point                   |               |              |            |              |              |                 |                |                  |                   |
| PBHL-Pinto 36 #3H         | 0 00          | 0 00         | 2,750 00   | -4,804 20    | -13 10       | 617,596 00      | 468,296 10     | 32° 41' 52 178 N | 104° 26' 11.018 W |
| - plan hits target center |               |              |            |              |              |                 |                |                  |                   |
| - Point                   |               |              |            |              |              |                 |                |                  |                   |

Plan Annotations

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                     |
|-----------------------------|-----------------------------|-------------------|-----------------|-----------------------------|
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                             |
| 2,272.54                    | 2,272.54                    | 0.00              | 0.00            | KOP Start Build 12 00°/100' |
| 3,022.54                    | 2,750.00                    | -477.47           | -1.30           | Land EOC hold 90 00°        |





Scientific Drilling for COG Operating LLC  
Site: Eddy County, NM (NAN27 NME)  
Well: Pinto 36 State Com #3H  
Wellbore: OH  
Design: Plan #1 8-3/4" Hole



#### SECTION DETAILS

| Sec | MD       | Inc   | Azi    | TVD     | +N/-S    | +E/-W  | Dleg  | TFace  | Vsect   | Target            |
|-----|----------|-------|--------|---------|----------|--------|-------|--------|---------|-------------------|
| 1   | 0 00     | 0 00  | 0 00   | 0 00    | 0 00     | 0 00   | 0 00  | 0 00   | 0 00    |                   |
| 2   | 2272.54  | 0 00  | 0 00   | 2272.54 | 0 00     | 0 00   | 0 00  | 0 00   | 0 00    |                   |
| 3   | 33022.54 | 90 00 | 180 16 | 2750 00 | -477.46  | -13 10 | 12 00 | 180 16 | 477 46  |                   |
| 4   | 7349 29  | 90 00 | 180 16 | 2750 00 | -4804.20 | -13 10 | 0 00  | 0 00   | 4804.22 | PBHL-Pinto 36 #3H |

#### WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

| Name                     | TVD     | +N/-S    | +E/-W  | Northing  | Easting   | Latitude        | Longitude        | Shape |
|--------------------------|---------|----------|--------|-----------|-----------|-----------------|------------------|-------|
| PP=330' FNL Pinto 36 #3H | 2646 02 | -180 00  | -0 49  | 622220.20 | 468308.71 | 32°42' 37.938 N | 104°26' 10.923 W | Point |
| PBHL-Pinto 36 #3H        | 2750 00 | -4804 20 | -13 10 | 617596.00 | 468296 10 | 32°41' 52.178 N | 104°26' 11.018 W | Point |

#### WELL DETAILS: Pinto 36 State Com #3H

|       | Ground Level | 3465.00   |           |                 |                  |
|-------|--------------|-----------|-----------|-----------------|------------------|
| +N/-S | +E/-W        | Northing  | Easting   | Latitude        | Longitude        |
| 0 00  | 0 00         | 622400.20 | 468309 20 | 32°42' 39 719 N | 104°26' 10 919 W |

#### Pinto 36 State Com #3H

Created By: Julio Pina Date: 12-Dec-11

Checked: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_

#### PROJECT DETAILS: Eddy County, NM (NAN27 NME)

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

