

Form 3160-3  
(April 2004)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

RECEIVED

JUL 10 2012

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

NMOC D ARTESIA

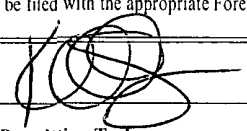
## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5 Lease Serial No N/A	
1b Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6 If Indian, Allottee or Tribe Name N/A	
2 Name of Operator Chevron USA Agent: COG Operating LLC <229137>		7 If Unit or CA Agreement, Name and No NMNM-71030C; Skelly Unit	
3a Address 550 W. Texas Ave., Suite 100 Midland, TX 79701		8 Lease Name and Well No SKELLY UNIT #647 <305607>	
3b Phone No (include area code) 432-685-4384		9 API Well No 30-015- 40452	
4 Location of Well (Report location clearly and in accordance with any State requirements *) At surface SHL: 278 FSL & 194 FEL, Unit P Sec. 15 At proposed prod zone BHL: 330 FSL & 330 FWL, Unit M Sec. 14		10 Field and Pool, or Exploratory Mar Loco, Gloria Yaso 97866 426770	
11 Sec, T R M or Blk and Survey or Area Sec 14 & 15 T17S R31E		12 County or Parish EDDY	
13 State NM		14 Distance in miles and direction from nearest town or post office* 9 miles East of Loco Hills, NM	
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) 194'	16 No of acres in lease 640	17 Spacing Unit dedicated to this well 40	
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 174'	19 Proposed Depth TVD: 6800' MD: 6830'	20 BLM/BIA Bond No on file NMB000740; NMB000215	
21 Elevations (Show whether DF, KDB, RT, GL, etc) 3881' GL	22 Approximate date work will start* 04/30/2012	23 Estimated duration 15 days	

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall be attached to this form.

- Well plat certified by a registered surveyor.
- A Drilling Plan
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office)
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25 Signature 	Name (Printed/Typed) Kelly Holly	Date 02/13/2012
Title Permitting Tech		

Approved by (Signature) James A. Ames	Name (Printed/Typed) James A. Ames	Date JUL 8 2012
Title FIELD MANAGER		Office CARLSBAD FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

Conditions of approval, if any, are attached

APPROVAL FOR TWO YEARS

Title 18 USC Section 1001 and Title 43 USC Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

\*(Instructions on page 2)

ROSWELL CONTROLLED WATER BASIN

SEE ATTACHED FOR  
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

*Surface Use Plan  
COG Operating, LLC  
Skelly Unit #647*

*SL: 278' FSL & 194' FEL           UL P*

*Section 15, T-17-S, R-31-E*

*BHL: 330' FSL & 330' FWL       UL M*

*Section 14, T-17-S, R-31-E*

*Eddy County, New Mexico*

---

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or COG Operating, LLC, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this 10th day of January, 2012.

Signed: 

Printed Name: Carl Bird

Position: Drilling Engineer

Address: 550 W. Texas, Suite 1300, Midland, Texas 79701

Telephone: (432) 683-7443

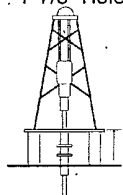
Field Representative (if not above signatory): Same

E-mail: cbird@conchoresources.com

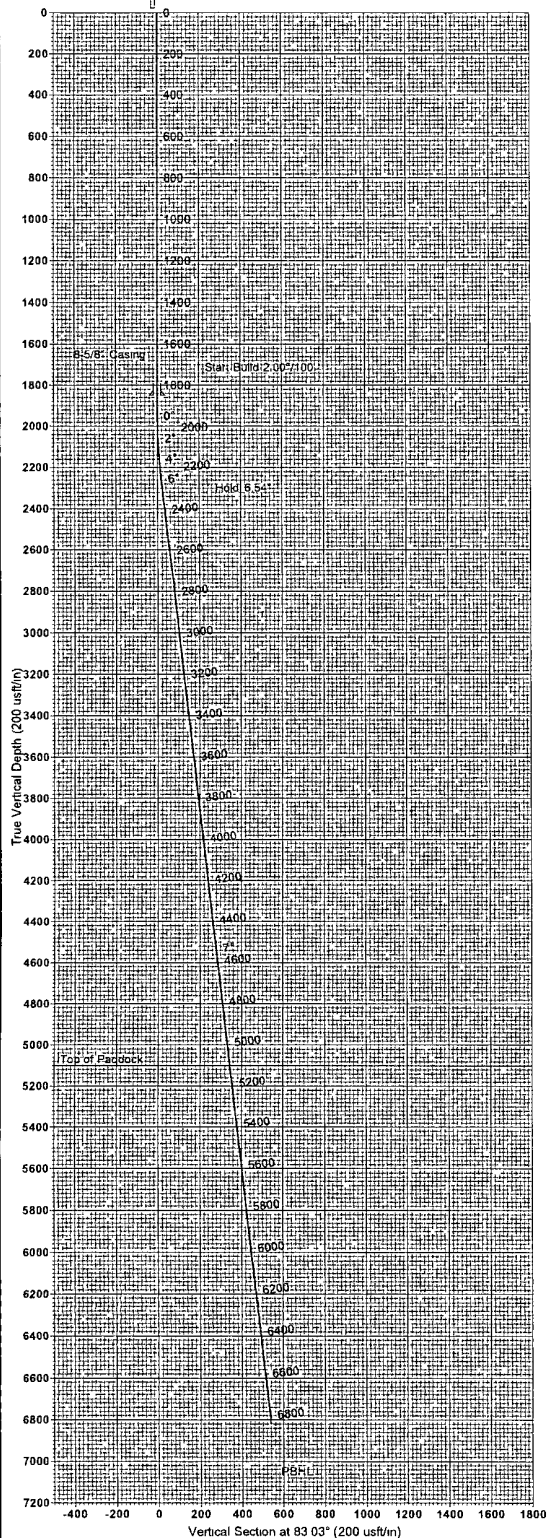


Azimuth to Grid North  
True North -0.28°  
Magnetic North 7.43°  
Magnetic Field  
Strength 48868 Zant  
Dip Angle 60.68°  
Date 2012/01/13  
Model IGRF2010

Skelly Unit #647  
Eddy County, NM (NAN27 NME)  
Northing: (Y) 665283.20  
Easting: (X) 648776.50  
Plan #1 - 7-7/8" Hole



GL: 3881.00



#### WELL DETAILS Skelly Unit #647

+N-S	+E-W	Northing	Ground Level	Easting	Latitude	Longitude	Slot
0.00	0.00	665283.20	3881.00	648776.50	32° 49' 40.847 N	103° 50' 56.402 W	

#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSecl	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1950.00	0.00	0.00	1950.00	0.00	0.00	0.00	0.00	0.00	
3	2277.20	6.54	83.03	2276.49	2.26	18.53	2.00	83.03	18.06	
4	6830.38	6.54	83.03	6800.00	65.20	533.60	0.00	0.00	537.57	PBHL-SU #647

#### DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
South HL-SU #647	1.00	55.20	523.60	665338.40	649300.1032	49 41 37.0 N 3° 50' 50.262 W	Rectangle (Sides 1.0 0.0 W 100.00)	
plan masses target center by 526.50usft at 0.00usft MD (0.00 TVD 0.00 N 0.00 E)	1.00	55.20	523.60	665338.40	649300.1032	49 41 37.0 N 3° 50' 50.262 W	Rectangle (Sides 1.0 0.0 W 100.00)	
West HL-SU #647	1.00	55.20	523.60	665338.40	649300.1032	49 41 37.0 N 3° 50' 50.262 W	Rectangle (Sides 1.0 0.0 W 100.00)	
plan masses target center by 526.50usft at 0.00usft MD (0.00 TVD 0.00 N 0.00 E)	1.00	55.20	523.60	665338.40	649300.1032	49 41 37.0 N 3° 50' 50.262 W	Rectangle (Sides 1.0 0.0 W 100.00)	
PBHL-SU #647	6850.00	65.20	533.60	665348.40	649310.1032	49 41 46.6 N 3° 50' 50.145 W	Circle (Radius 10.00)	
- plan hits target center								

#### SITE DETAILS Skelly Unit #647

Site Centre Northing 665283.20

Easting 648776.50

Positional Uncertainty 0.00

Convergence 0.26

Local North Grid

#### 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

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
5100.00	5118.23	Top of Paddock	0.00	

#### CASING DETAILS

TVD	MD	Name	Size
1850.00	1850.00	8-5/8" Casing	8-5/8"

Map System US State Plane 1927 (Exact solution)

Datum NAD 1927 (NADCON CONUS)

Ellipsoid Clarke 1866

Zone New Mexico East 3001

Local Origin Site Skelly Unit #647, Grid North

Latitude 32° 49' 40.847 N

Longitude 103° 50' 56.402 W

Grid East 648776.50

Grid North 665283.20

Scale Factor 1.000

Geomagnetic Model IGRF2010

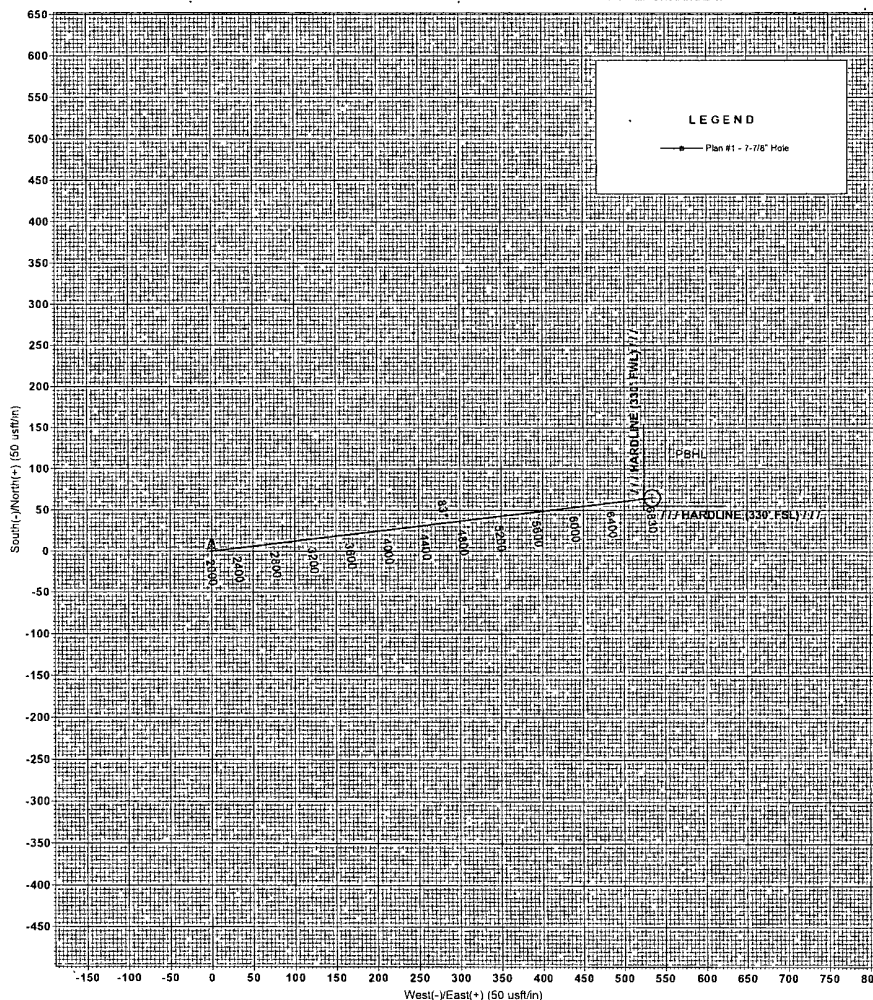
Sample Date 13-Jan-12

Magnetic Declination 7.43°

Dip Angle from Horizontal 60.68°

Magnetic Field Strength 48868

To convert a Magnetic Direction to a Grid Direction: Add 7.43°  
To convert a Magnetic Direction to a True Direction: Add 7.43° East  
To convert a True Direction to a Grid Direction: Subtract 0.26°



**COG OPERATING LLC**  
550 West Texas, Suite 1300  
Midland, TX 79701

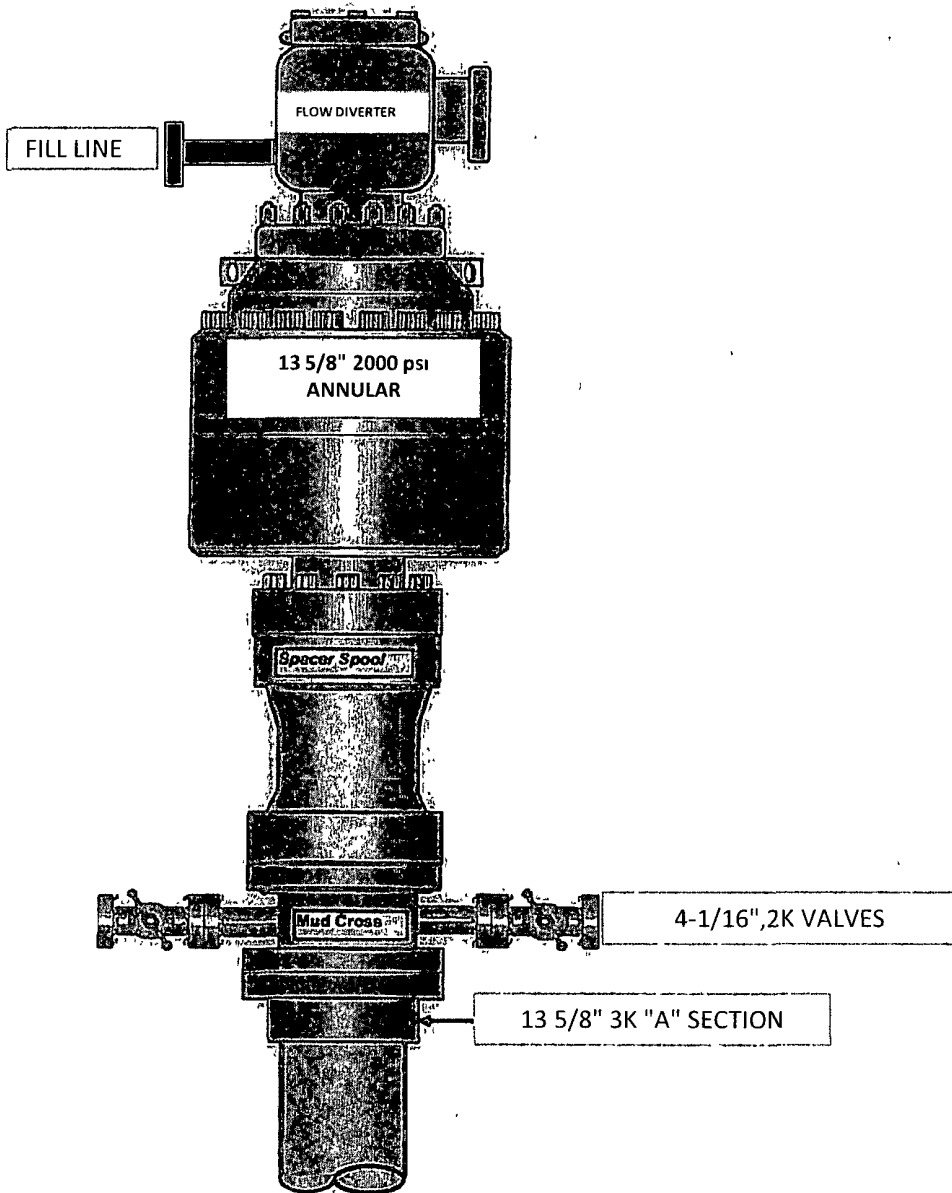
**DIRECTIONAL PLAN VARIANCE REQUEST**

**SKELLY UNIT #647**  
**EDDY COUNTY, NM**

SHL	278 FSL 194 FEL	Sec 15, T17S, R31E, UL P
BHL	330 FSL 330 FWL	Sec 14, T17S, R31E, UL M

COG Operating LLC, as Operator, desires that the APD reflect the footages as stated on the surveyor's plat. However, Operator also desires to avoid inadvertently drilling the well to a non-standard location. Therefore, due to the proximity of the plat bottom hole location to the pro-ration unit hard line(s), the attached directional plan is designed to avoid the hard lines by as much as fifty feet; said fifty feet being in either (or both) the north-south and/or east-west directions as applicable.

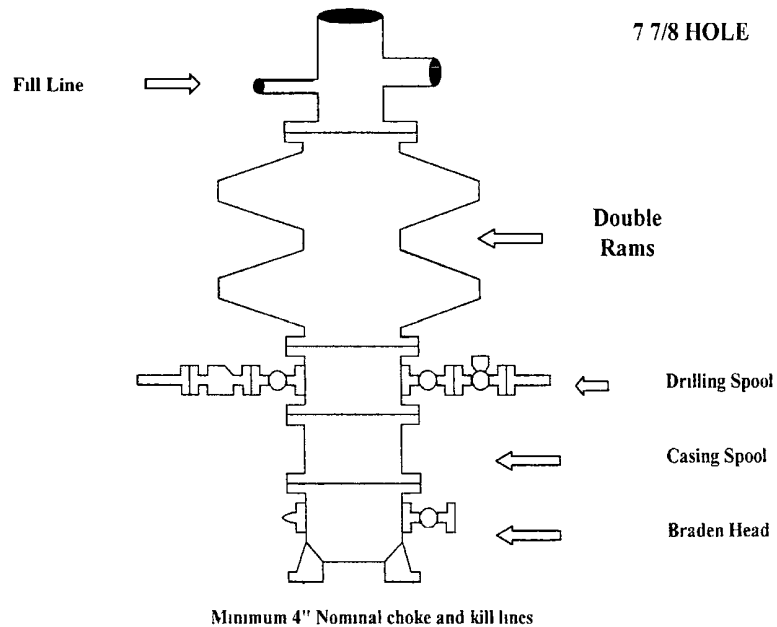
13 5/8" 2K ANNULAR



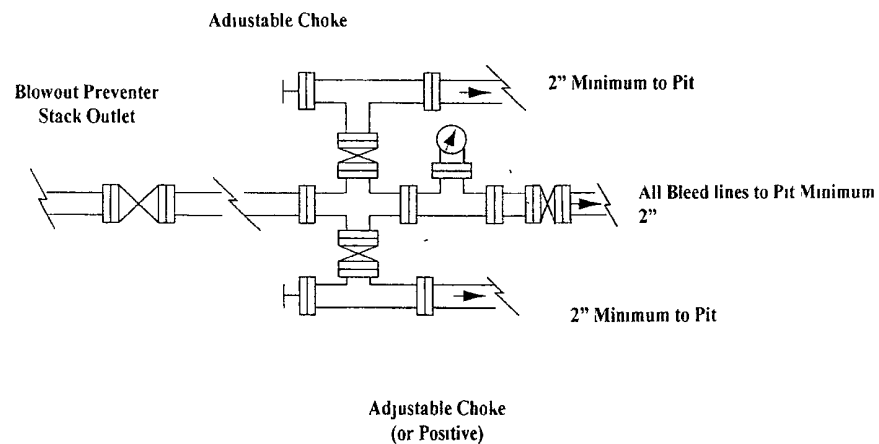
# COG Operating LLC

## Exhibit #9

### BOPE and Choke Schematic



Choke Manifold Requirement (2000 psi WP)  
No Annular Required

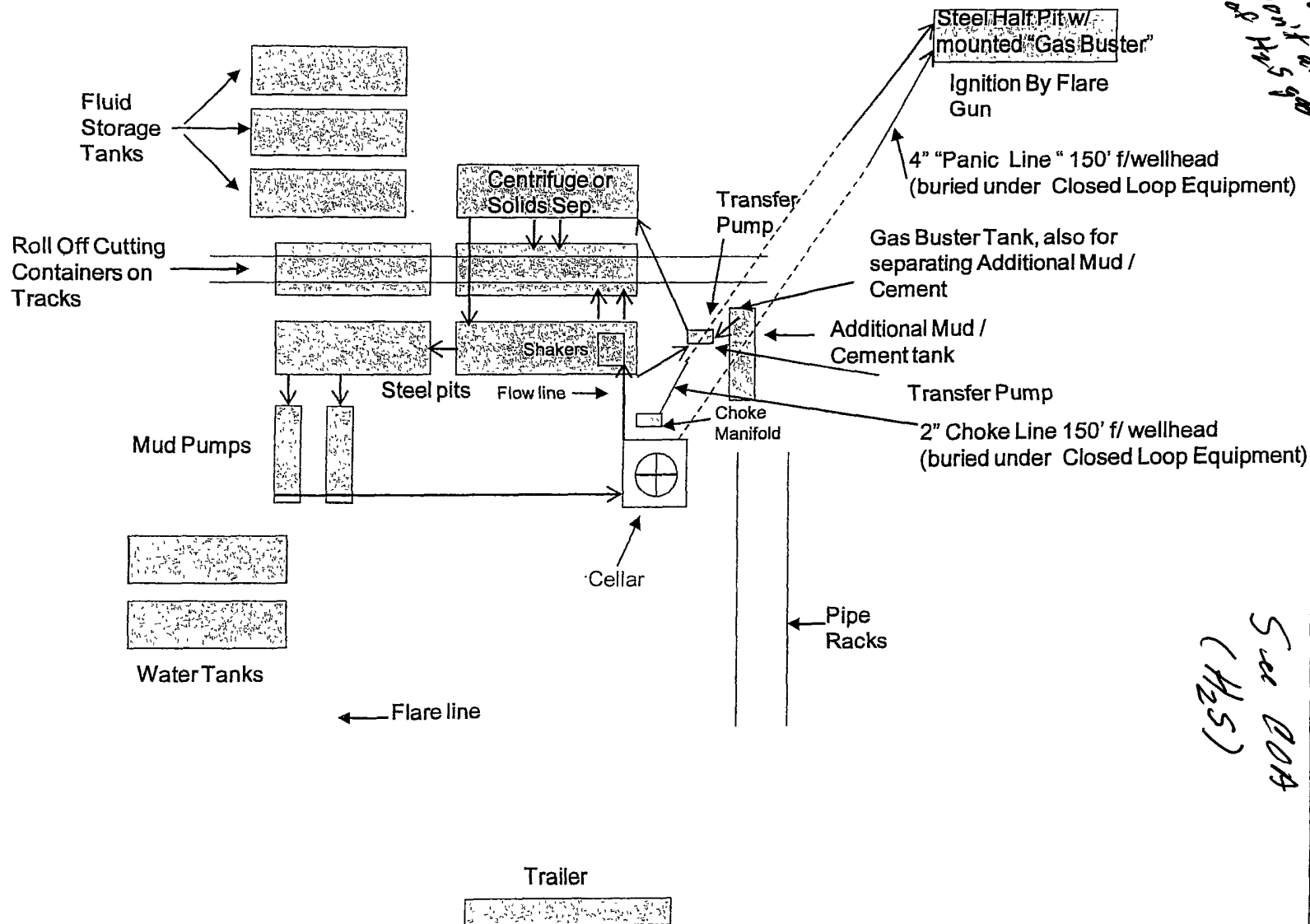


**NOTES REGARDING THE BLOWOUT PREVENTERS**

**Master Drilling Plan  
Eddy County, New Mexico**

1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum I.D. equal to preventer bore.
2. Wear ring to be properly installed in head
3. Blow out preventer and all fittings must be in good condition, 2000 psi WP minimum
4. All fittings to be flanged.
5. Safety valve must be available on rig floor at all times with proper connections, valve to be full 2000 psi WP minimum.
6. All choke and fill lines to be securely anchored especially ends of choke lines.
7. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
8. Kelly cock on Kelly.
9. Extension wrenches and hands wheels to be properly installed.
10. Blow out preventer control to be located as close to driller's position as feasible.
11. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation all API specifications

COG Operating LLC  
Closed Loop Equipment Diagram





## Closed Loop Operation & Maintenance Procedure

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

### Hydrogen Sulfide Drilling Operation Plan

#### I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H<sub>2</sub>S on metal components. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan. **The concentrations of H<sub>2</sub>S of wells in this area from surface to TD are low enough that a contingency plan is not required.**

## II. H2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H2S.

### 1. Well Control Equipment:

- A. Flare line.
- B. Choke manifold.
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
- D. Auxiliary equipment may include if applicable: annular preventer & rotating head.

### 2. Protective equipment for essential personnel:

- A. Mark II Survive air 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

### 3. H2S detection and monitoring equipment:

- A. 1 portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.

### 4. Visual warning systems:

- A. Wind direction indicators as shown on well site diagram (Exhibit #8).
- B. Caution/Danger signs (Exhibit #7) shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

### 5. Mud program:

- A. The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

**6. Metallurgy:**

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H<sub>2</sub>S service.
- B. All elastomers used for packing and seals shall be H<sub>2</sub>S trim.

**7. Communication:**

- A. Radio communications in company vehicles including cellular telephone and 2-way radio.
- B. Land line (telephone) communication at Office.

**8. Well testing:**

- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H<sub>2</sub>S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

**EXHIBIT #7**

**WARNING**  
**YOU ARE ENTERING AN H<sub>2</sub>S**  
**AUTHORIZED PERSONNEL ONLY**

- 1. BEARDS OR CONTACT LENSES NOT ALLOWED
- 2. HARD HATS REQUIRED
- 3. SMOKING IN DESIGNATED AREAS ONLY
- 4. BE WIND CONSCIOUS AT ALL TIMES
- 5. CHECK WITH COG OPERATING FOREMAN AT

**COG OPERATING LLC**  
**1-432-683-7443**  
**1-575-746-2010**

**EDDY COUNTY EMERGENCY NUMBERS**

ARTESIA FIRE DEPT. 575-746-5050  
ARTESIA POLICE DEPT. 575-746-5000  
EDDY CO. SHERIFF DEPT. 575-746-9888

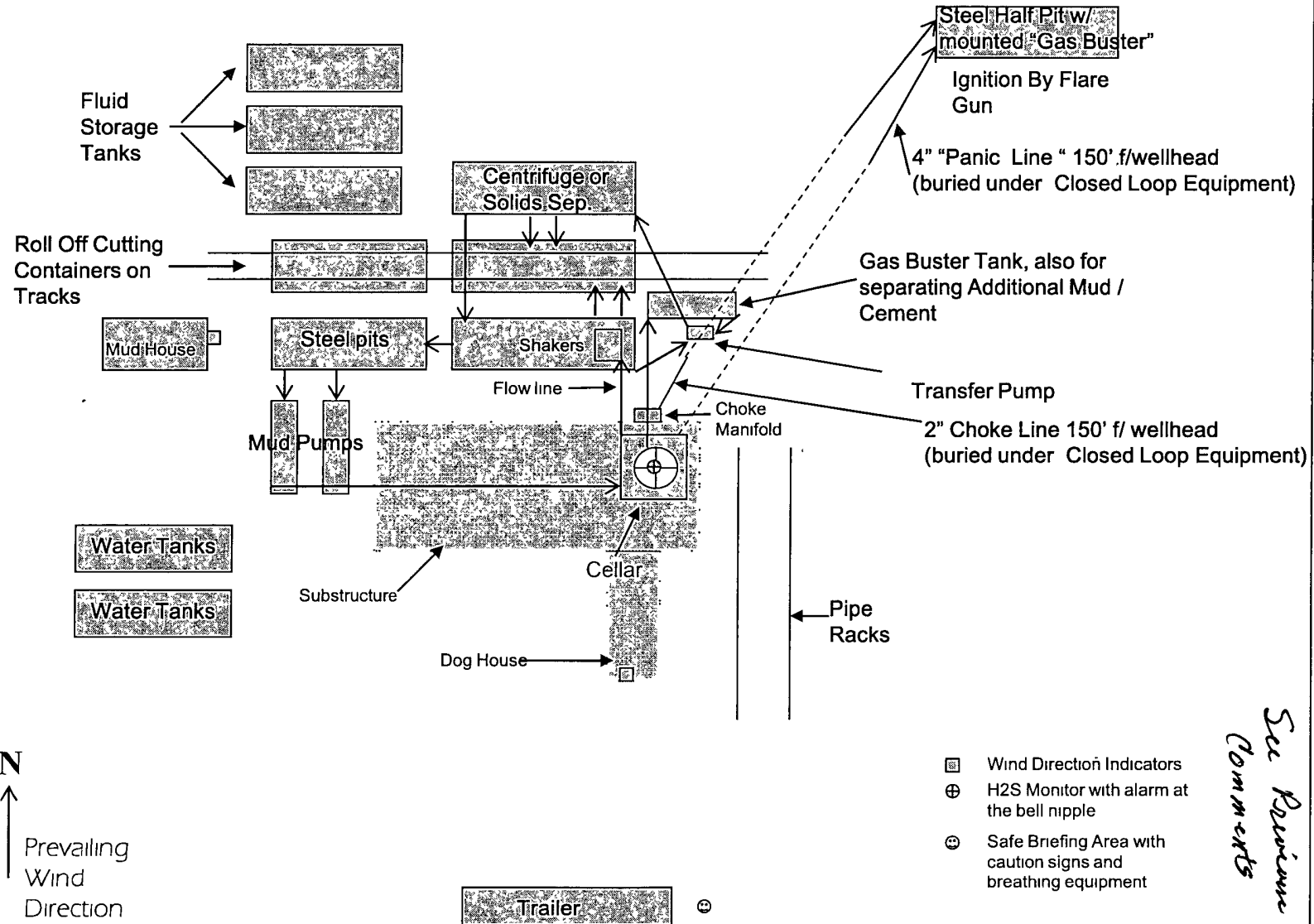
**LEA COUNTY EMERGENCY NUMBERS**

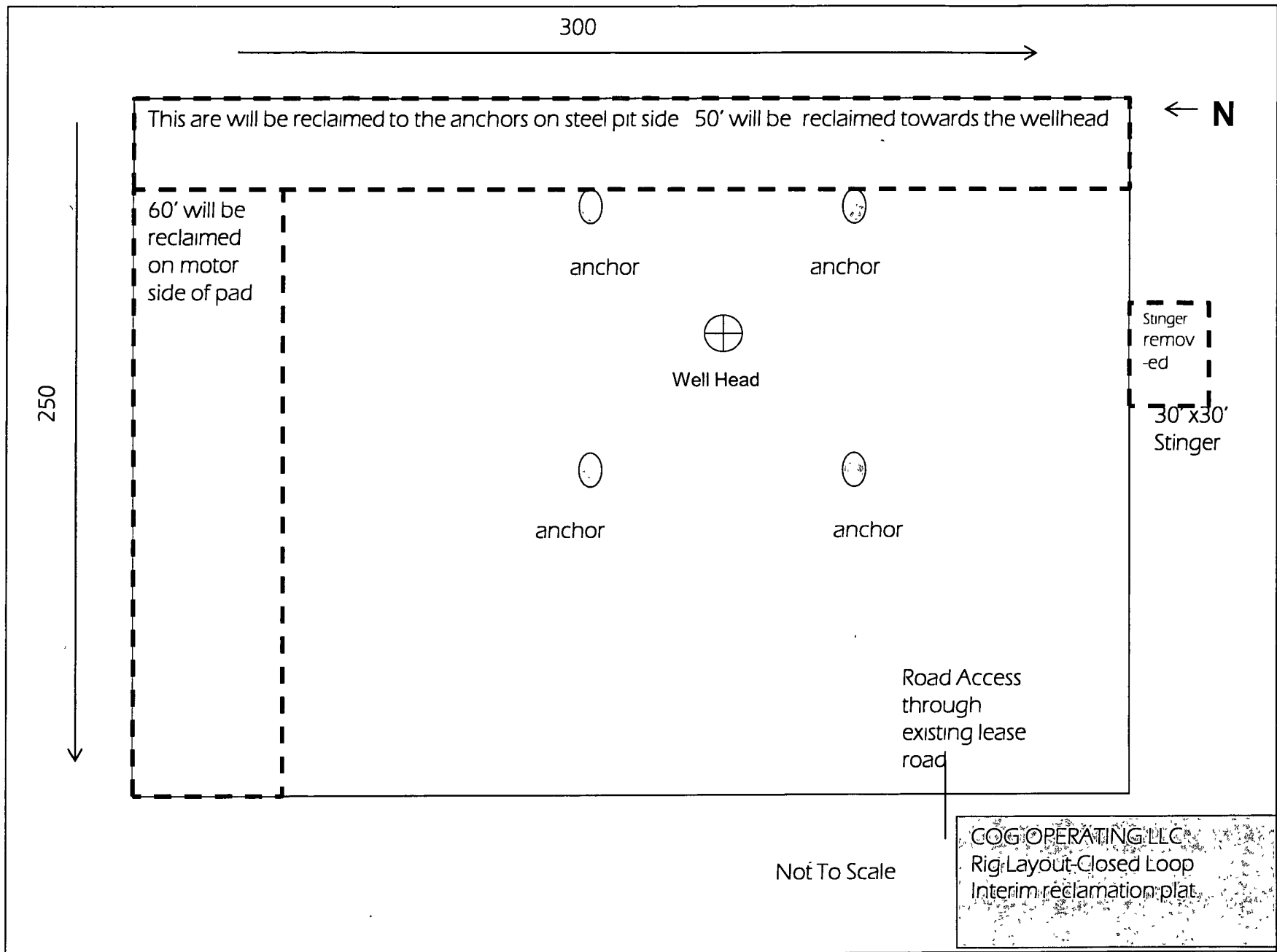
HOBBS FIRE DEPT. 575-397-9308  
HOBBS POLICE DEPT. 575-397-9285  
LEA CO. SHERIFF DEPT. 575-396-1196

COG Operating LLC

## EXHIBIT 8

Drilling Location - H2S Safety Equipment Diagram





**PECOS DISTRICT  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	COG OPERATING, LLC
LEASE NO.:	LC-029418A
WELL NAME & NO.:	SKELLY UNIT #647
SURFACE HOLE FOOTAGE:	278' FSL & 194' FEL
BOTTOM HOLE FOOTAGE:	330' FSL & 330' FWL (Sec.14)
LOCATION:	Section 15, T.17 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

**TABLE OF CONTENTS**

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Lesser Prairie-Chicken Timing Stipulations
  - Ground-level Abandoned Well Marker
- ☒ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - H2S requirement
  - Logging requirement
  - Waste Material and Fluids
- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
- ☐ **Interim Reclamation**
- ☒ **Final Abandonment & Reclamation**