Form 3160-3
(December 1990)

SUBMIT IN TRIPLICATE*
(Other Instructions on

Form approved. H-06-46
Budget Bureau No. 1004-0136
Expires: December 31, 1991

UNITED STATES
DEPARTMENT OF THE INTERIOR OCD-HOBBS
BUREAU OF LAND MANAGEMENT

# APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NMLC-029509A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL ☒ DEEPEN ☐

7. UNIT AGREEMENT NAME:

b. TYPE OF WELL: OIL WELL ☒ Gas Well ☐ OTHER SINGLE ZONE ☐ MULTIPLE ZONE ☐

8. FARM OR LEASE NAME, WELL NO. (37025 19): MC Federal #9

2. NAME OF OPERATOR: COG Operating LLC (229137)

9. API WELL NO.: 30-025-37967

3. ADDRESS AND TELEPHONE NO.: 550 W. Texas Suite 1300 Midland, TX 79701 (432) 685-4372

10. FIELD AND POOL, OR WILDCAT: Maljamar;Abo

4. LOCATION OF WELL (Report location clearly and in accordance with any state requirement.*)
At surface: 2085 FNL & 1875 FWL
At proposed prod. zone: Unit F

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec 21 T17S R32E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 3 miles southwest of Maljamar

12. COUNTY OR PARISH: Lea | 13. STATE: NM

| 15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) | 16. NO. OF ACRES IN LEASE | 17. NO OF ACRES IN LEASE TO THIS WELL |
|---|---|---|
| 555 | 640 | 80 |
| **18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED OR APPLIED FOR, ON THIS LEASE, FT.** | **19. PROPOSED DEPTH** | **20. ROTARY OR CABLE TOOLS** |
| 660 | 9300 | Rotary |

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 4057' GR ROSWELL CONTROLLED WATER BASIN

22. APPROX. DATE WORK WILL START*: 6/15/2006

23. PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | GRADE, SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|---|---|---|---|---|
| 17 1/2 | H-40,13 3/8 | 48 | 650 | Circ |
| 12 1/4 | J-55, 8 5/8 | 32 | 2100 | Circ |
| 7 7/8 | J-55, 5 1/2 | 17 | 9300 | Suff to Circ |

Witness Surface Casing

COG Operating LLC proposes to drill to a depth sufficient to test the Abo formation for oil and gas. If productive, 5 1/2" casing will be cemented. If non-productive, the well will be plugged and abandoned in a manner consistent with federal regulation. Specific programs as per Onshore Oil and Gas Order #1 are outlined in the following attachments:

1. Surveys
   - Exhibit #1- Well Location Plat
   - Exhibit #2- Vicinity Map
   - Exhibit #3- Location Verification Map
2. Drilling Program
3. Surface Use & Operating Plan
   - Exhibit #4- One Mile Radius Map
   - Exhibit #5- Production Facilities Layout
   - Exhibit #6- Location Layout
4. Certification
5. Hydrogen Sulfide Drilling Operation Plan
   - Exhibit #7- H2S Warning Sign
   - Exhibit #8- H2S Safety Equipment
6. Blowout Preventers
   - Exhibit #9- BOPE Schematic
   - Exhibit #10- Blowout Preventer Requirements
   - Exhibit #11- Choke Manifold
7. Responsibility Statement

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Jerry W. Sherrell TITLE Production Clerk DATE 5/15/2006

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

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:

APPROVED BY /s/ James Stovall Acting TITLE FIELD MANAGER DATE JUN 16 2006

*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

Title 18 U.S.C. Section 1001, makes 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.

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III
1000 Rio Brazos Rd., 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, New Mexico 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

| API Number | Pool Code | Pool Name |
|---|---|---|
| 30-025-37967 | 43250 | Maljamar;Abo |

| Property Code | Property Name | Well Number |
|---|---|---|
| 302519 | MC FEDERAL | 9 |

| OGRID No. | Operator Name | Elevation |
|---|---|---|
| 229137 | COG OPERATING LLC | 4057' |

### Surface Location

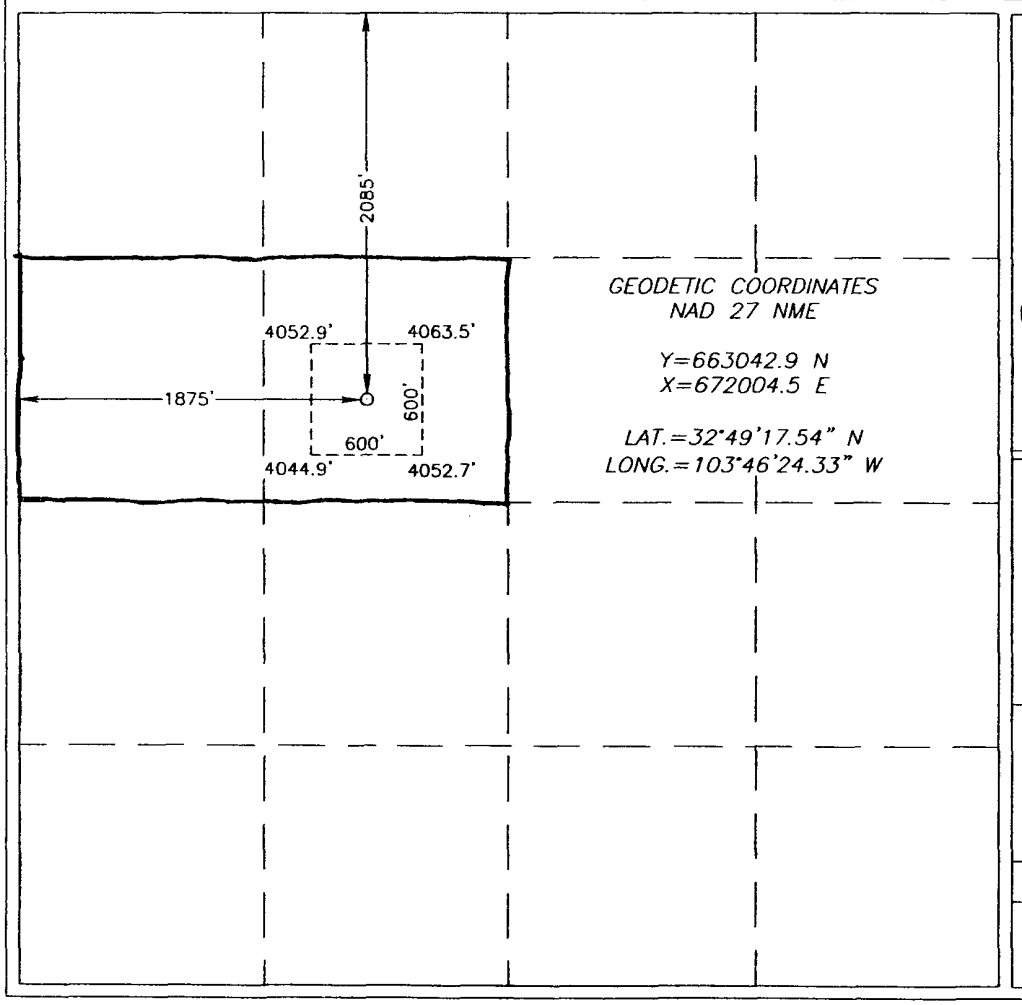
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| F | 21 | 17-S | 32-E | | 2085 | NORTH | 1875 | WEST | LEA |

### Bottom Hole Location If Different From Surface

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |
|---|---|---|---|
| 80 | | | |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION




### OPERATOR CERTIFICATION

*I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.*

Jerry W. Sherrell 5/15/06
Signature Date

Jerry W. Sherrell
Printed Name

### SURVEYOR CERTIFICATION

*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.*

APRIL 19, 2006
Date Surveyed MR

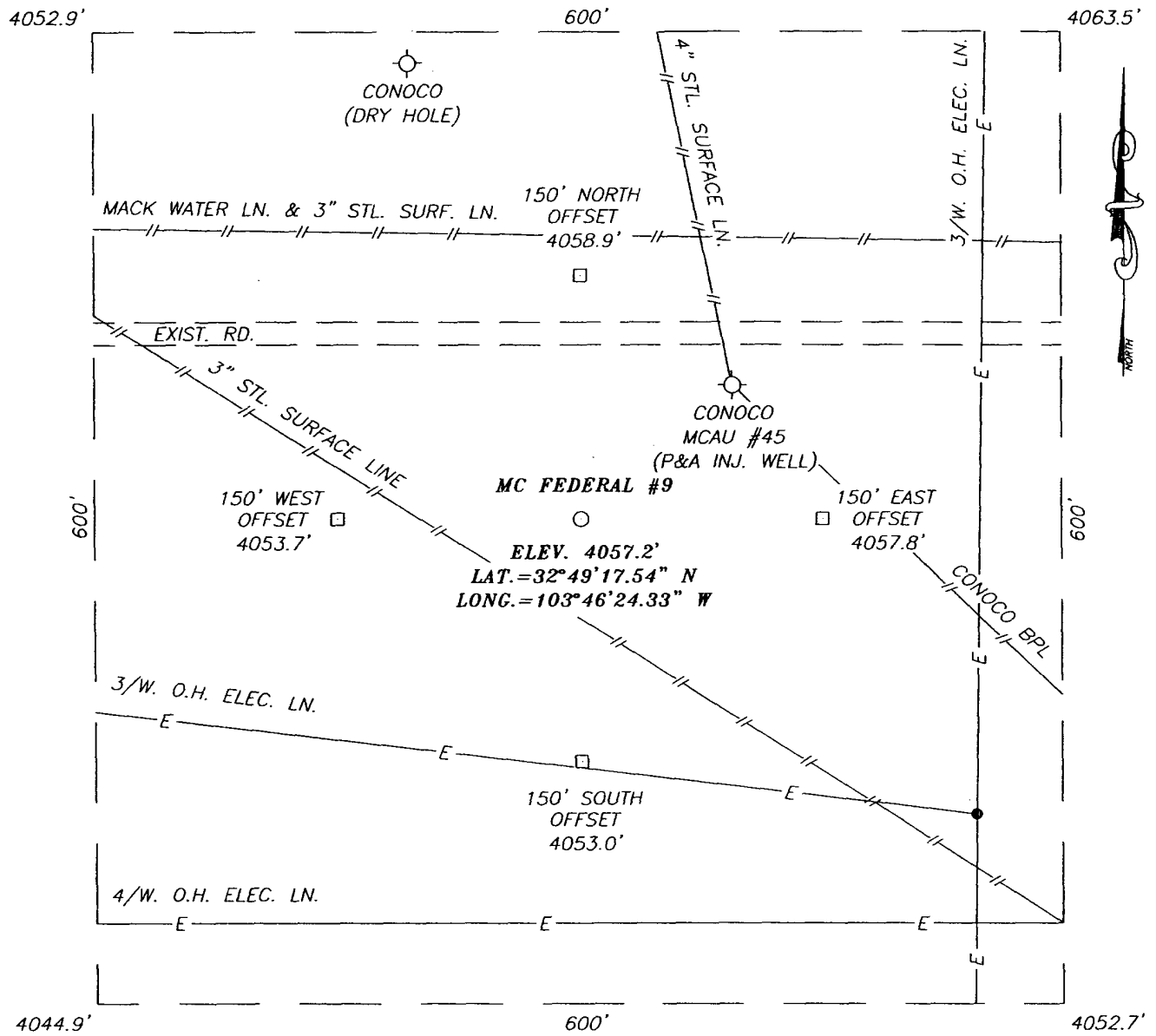
Signature & Seal of Professional Surveyor

GARY L. EIDSON NEW MEXICO 12641 REGISTERED PROFESSIONAL SURVEYOR
Gary L. Eidson 5/4/06
06.11.0680

Certificate No. GARY EIDSON 12641

# SECTION 21, TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M.,

LEA COUNTY, NEW MEXICO




DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #529 AND CO. RD. L-126 (MALJAMAR RD.), GO NORTH ON CO. RD. L-126 APPROX. 2.0 MILES. TURN LEFT ON CONOCO RD. AND GO WEST APPROX. 0.3 MILES. TURN RIGHT AND GO NORTH APPROX. 0.3 MILES. TURN LEFT AND GO WEST APPROX. 0.2 MILES. THIS LOCATION IS APPROX. 100 FEET SOUTH.

100 0 100 200 Feet

Scale:1"=100'


PROVIDING SURVEYING SERVICES SINCE 1946

JOHN WEST SURVEYING COMPANY

412 N. DAL PASO

HOBBS, N.M. 88240

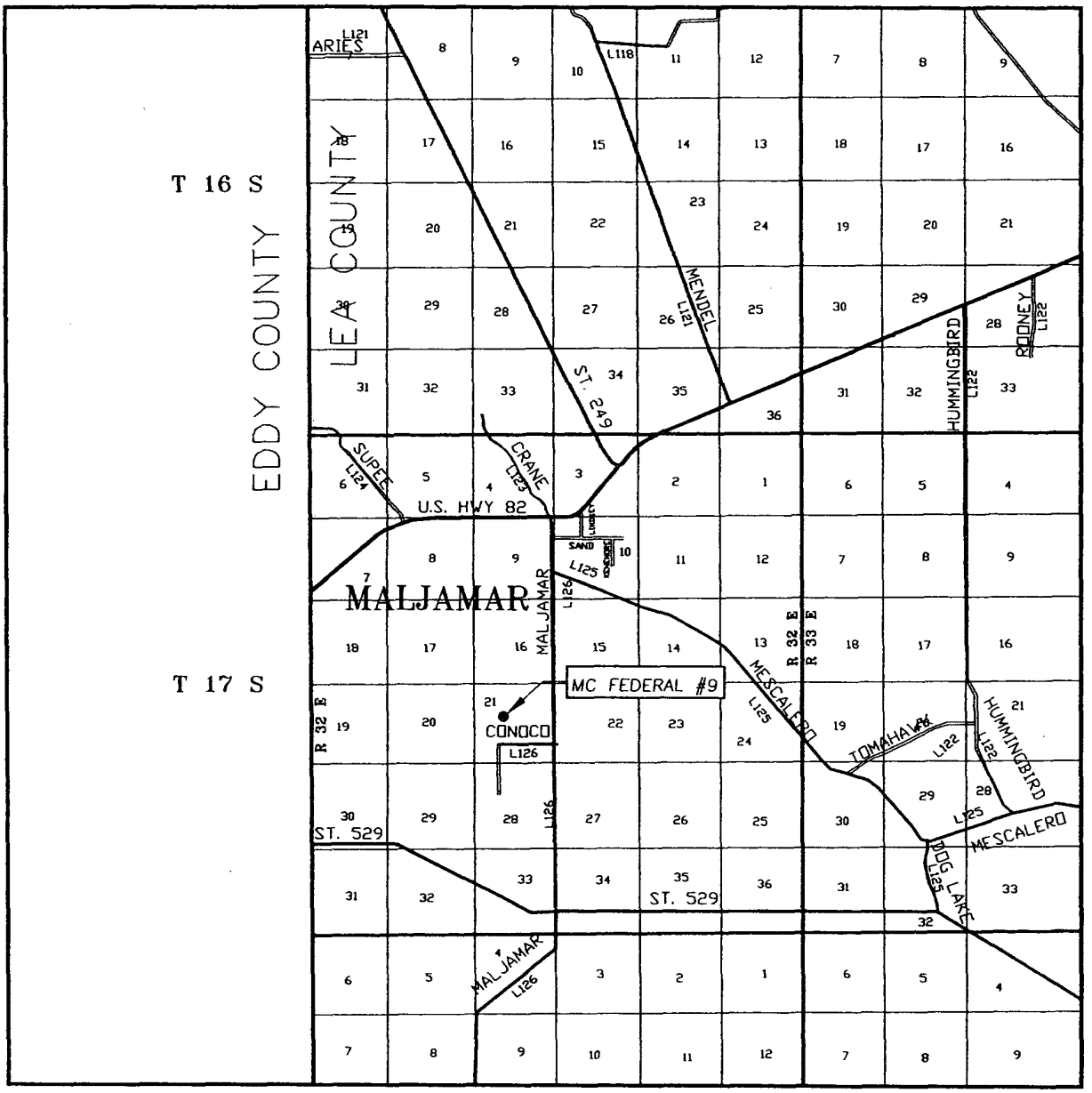
(505) 393-3117


## MACK ENERGY CORPORATION

MC FEDERAL #9
LOCATED 2085 FEET FROM THE NORTH LINE
AND 1875 FEET FROM THE WEST LINE OF SECTION 21,
TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

| | | | |
|---|---|---|---|
| Survey Date: 04/19/06 | Sheet 1 of 1 Sheets | | |
| W.O. Number: 06.11.0680 | Dr By: M.R. | Rev 1:N/A | |
| Date: 04/26/06 | Disk: CD#6 | 06110680 | Scale:1"=100' |

# VICINITY MAP




SCALE: 1" = 2 MILES

SEC. 21 TWP. 17-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 2085' FNL & 1875' FWL

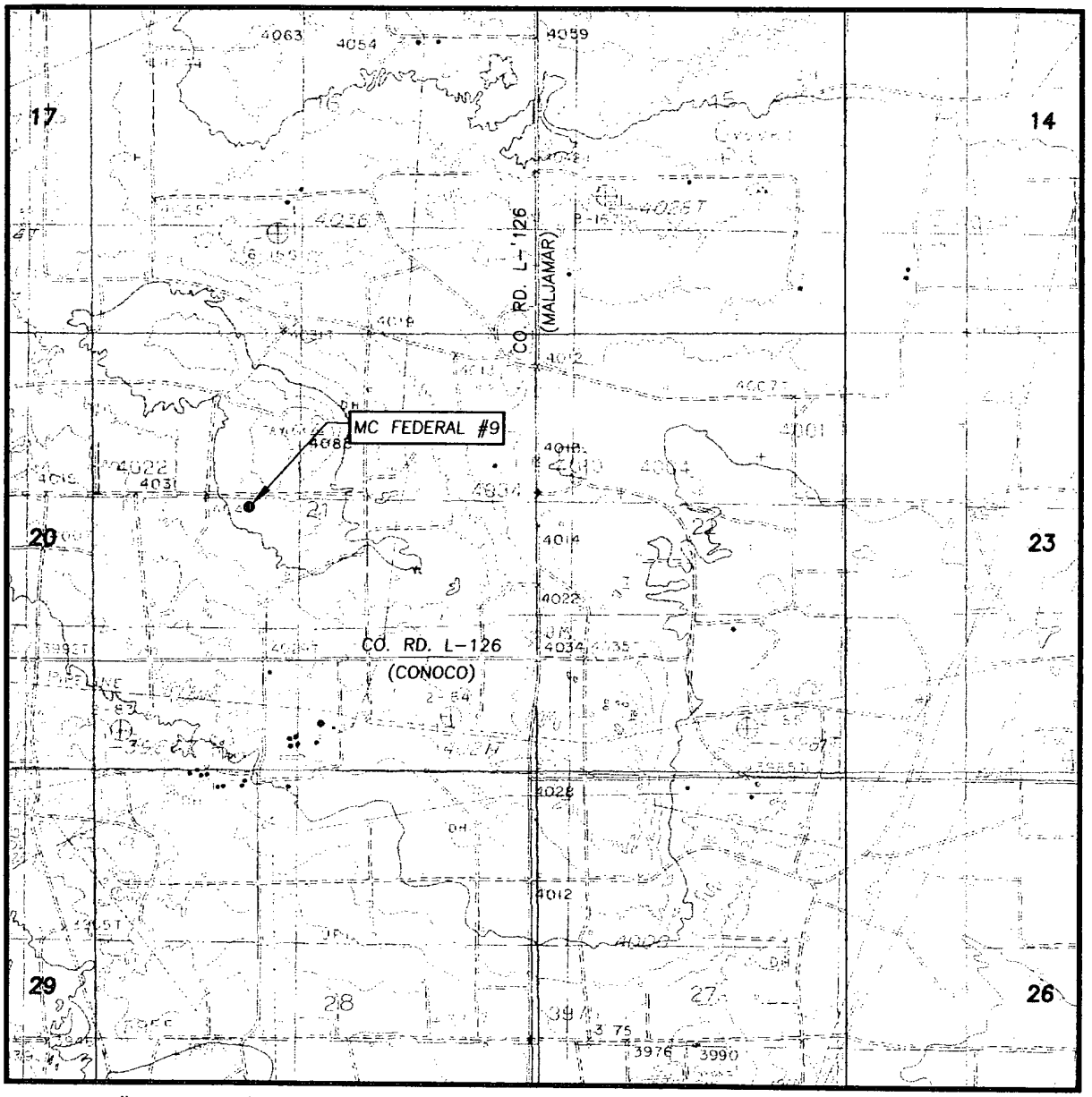
ELEVATION 4057'

OPERATOR MACK ENERGY CORPORATION

LEASE MC FEDERAL


PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

# LOCATION VERIFICATION MAP




SCALE: 1" = 2000'

CONTOUR INTERVAL:
MALJAMAR, N.M. – 10'
DOG LAKE, N.M. – 10'

SEC. 21 TWP. 17-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 2085' FNL & 1875' FWL

ELEVATION 4057'

OPERATOR MACK ENERGY CORPORATION

LEASE MC FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
MALJAMAR, N.M.

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

**Attached to Form 3160-3**
**COG Operating LLC**
**MC Federal #9**
**2085 FNL & 1875 FWL**
**SE/4 NW/4, Sec 21 T17S R32E**
**Lea County, NM**

# DRILLING PROGRAM

## 1. Geologic Name of Surface Formation

Quaternary

## 2. Estimated Tops of Important Geologic Markers:

| | | | |
|---|---|---|---|
| Quaternary | Surface | Abo | 7540' |
| Grayburg | 3450' | | |
| San Andres | 3850' | | |
| Glorietta | 5366' | | |
| Tubb | 6840' | | |

## 3. Estimated Depths of Anticipated Fresh Water, Oil and Gas:

| | | |
|---|---|---|
| Water Sand | 150' | Fresh Water |
| Abo | 7540' | Oil/Gas |
| Wolcamp | 9300' | Oil/Gas |

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8" casing to 650' and circulating cement back to surface will protect the surface fresh water sand. Salt Section will be protected by setting 8 5/8" casing to 2100' and circulating cement back to surface. Any shallower zones above TD, which contain commercial quantities of oil and/or gas, will have cement circulated across them by cementing 5 1/2" production casing, which will be run at TD.

## 4. Casing Program:

| Hole Size | Interval | OD Casing | Weight, Grade, Jt, Cond., Type |
|---|---|---|---|
| 17 ½" | 0-650' | 13 3/8" | 48#, H-40, ST&C, New, R-3 |
| 12 ¼" | 0-2100' | 8 5/8" | 32#, J-55, ST&C, New, R-3 |
| 7 7/8" | 0-TD | 5 1/2" | 17#, J-55, LT&C, New, R-3 |

## 5. Cement Program:

13 3/8" Surface Casing: Circulate to Surface with Class C w/2% CaCl2.

8 5/8 Intermiate Casing: Circulate to Surface with Class C W/2% CaCl2.

5 1/2" Production Casing: Cement Casing with Class C w/6# Salt & 2/10 of 1% CFR-3 per sack. We will run a hole caliper and run sufficient cement to circulate to surface.

## 6. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #9 will consist of a double ram-type (The blowout preventer equipment (BOP) shown in Exhibit #9 will consist of a double ram-type (2000 psi WP) preventer. This unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on top of 4 1/2" drill pipe rams on bottom. The BOP will be nippled up on the 13 3/8" surface casing and tested to 2000# by a 3rd party. The BOP will then be nippled up on the 8 5/8" intermediate casing and tested by a 3rd party to 2000 psi and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 2000 psi before drilling out of intermediate casing. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment (Exhibit #10) will include a Kelly cock and floor safety valve and choke lines and choke manifold (Exhibit #11) with 2000 psi WP rating.clude a Kelly cock and floor safety valve and choke lines and choke manifold (Exhibit #11) with 2000 psi WP rating.

## 7. Types and Characteristics of the Proposed Mud System:

The well will be drilled to TD with a combination of brine, cut brine and polymer mud system. The applicable depths and properties of this system are as follows:

| DEPTH | TYPE | WEIGHT | VISCOSITY | WATERLOSS |
|---|---|---|---|---|
| 0-650' | Fresh Water | 8.5 | 28 | N.C. |
| 650-2100' | Brine | 10 | 30 | N.C. |
| 2100'-TD | Cut Brine | 9.1 | 29 | N.C. |

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the well site at all times.

## 8. Auxiliary Well Control and Monitoring Equipment:

A. Kelly cock will be kept in the drill string at all times.

B. A full opening drill pipe-stabbing valve with proper drill pipe connections will be on the rig floor at all times.

**9. Logging, Testing and Coring Program:**

A. The electric logging program will consist of GR-Dual Laterolog, Spectral Density, Dual Spaced Neutron, CSNG Log and will be ran from T.D. to 9 5/8 casing shoe.

B. Drill Stem test is not anticipated.

C. No conventional coring is anticipated.

D. Further testing procedures will be determined after the 7" production casing has been cemented and TD has been reached based on drill shows and log evaluation.

**10. Abnormal Conditions, Pressures, Temperatures and Potential Hazards:**

No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 110 degrees and estimated maximum bottom hole pressure is 2300 psig. Low levels of Hydrogen sulfide have been monitors in producing wells in the area, so H2S may be present while drilling of the well a plan is attached to the Drilling program. No major loss of circulation zones has been reported in offsetting wells.

**11. Anticipated Starting Date and Duration of Operations:**

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is June 15, 2006. Once commenced, the drilling operation should be finished in approximately 20 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.

# 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 an characteristics of hydrogen sulfide (H2S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H2S 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 H2S on metal components. If high tensile tubular are to be used, personnel well 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 H2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. **The concentrations of H2S 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 H2S service.

   B. All elastomers used for packing and seals shall be H2S 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 H2S environment will use the closed chamber method of testing.

   B. There will be no drill stem testing.

## EXHIBIT #7

# WARNING

## YOU ARE ENTERING AN H2S

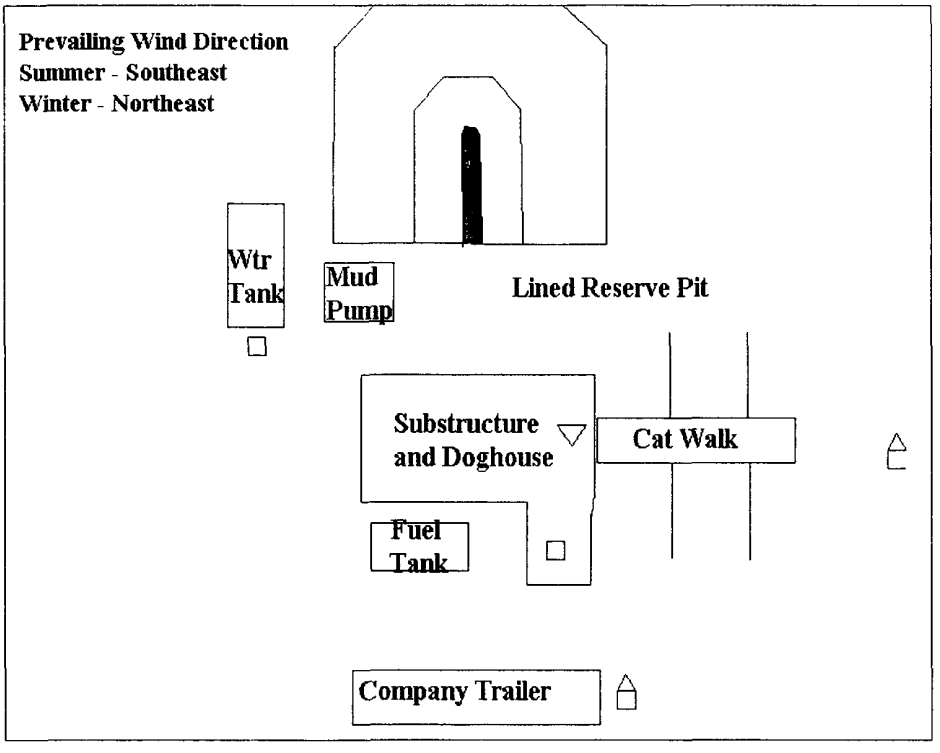
### AUTHORIZED PERSONNEL ONLY

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 MACK ENERGY FOREMAN AT OFFICE**

## MACK ENERGY CORPORATION

## 1-505-748-1288

## DRILLING LOCATION H2S SAFTY EQUIPMENT
**Exhibit # 8**




▽ H2S Monitors with alarms at the bell nipple

□ Wind Direction Indicators

△ Safe Briefing areas with caution signs and breathing equipment min 150 feet from

**Attachment to Exhibit #9**
**NOTES REGARDING THE BLOWOUT PREVENTERS**
**MC Federal #9**
**Lea 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.

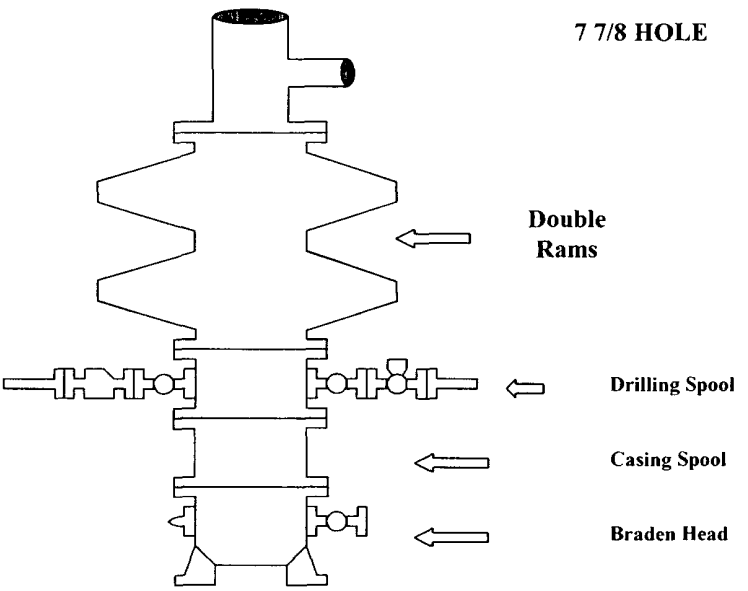
10. Blow out preventer control to be located as close to driller's position as feasible.

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.

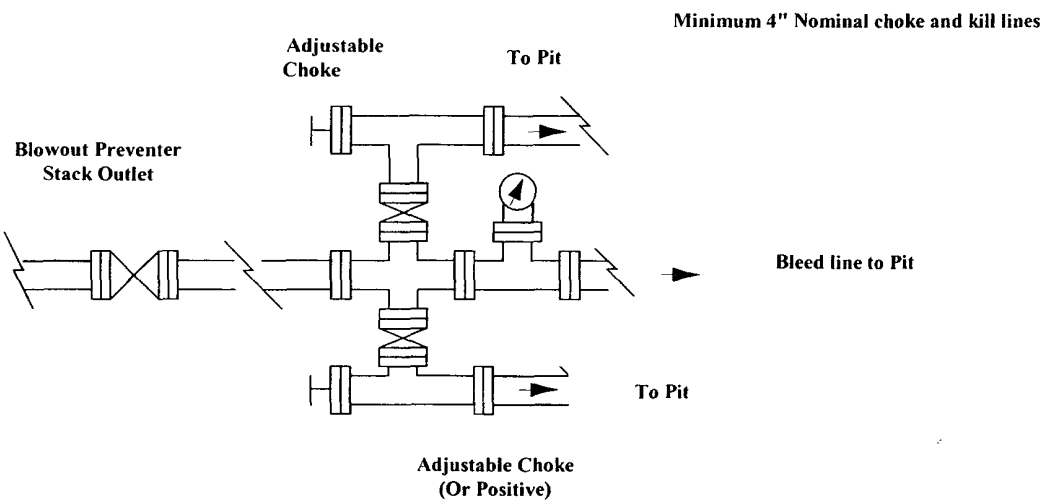
# COG Operating LLC

## Exhibit #9

## BOPE Schematic




**Choke Manifold Requirement (2000 psi WP)**
**No Annular Required**



# COG Operating LLC

## Minimum Blowout Preventer Requirements

### 2000 psi Working Pressure

### 2 MWP

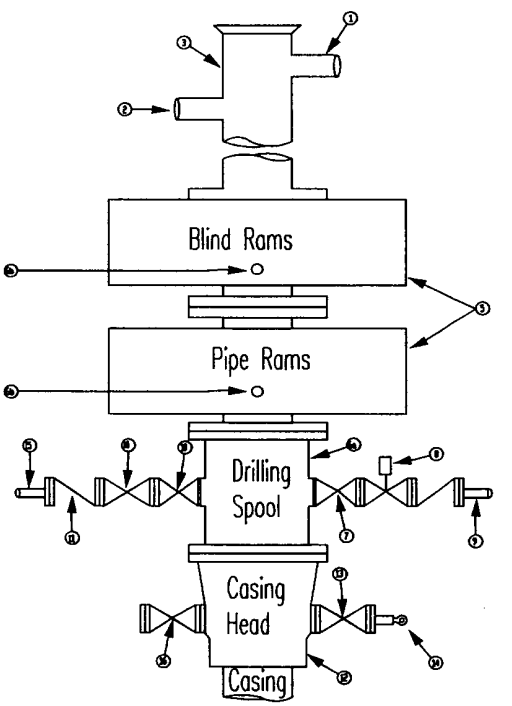
### EXHIBIT #10

## Stack Requirements

| NO. | Items | Min. I.D. | Min. Nominal |
|---|---|---|---|
| 1 | Flow line | | 2" |
| 2 | Fill up line | | 2" |
| 3 | Drilling nipple | | |
| 4 | Annular preventer | | |
| 5 | Two single or one dual hydraulically operated rams | | |
| 6a | Drilling spool with 2" min. kill line and 3" min choke line outlets | | 2" Choke |
| 6b | 2" min. kill line and 3" min. choke line outlets in ram. (Alternate to 6a above) | | |
| 7 | Valve Gate Plug | 3 1/8 | |
| 8 | Gate valve-power operated | 3 1/8 | |
| 9 | Line to choke manifold | | 3" |
| 10 | Valve Gate Plug | 2 1/16 | |
| 11 | Check valve | 2 1/16 | |
| 12 | Casing head | | |
| 13 | Valve Gate Plug | 1 13/16 | |
| 14 | Pressure gauge with needle valve | | |
| 15 | Kill line to rig mud pump manifold | | 2" |

### OPTIONAL

| | | | |
|---|---|---|---|
| 16 | Flanged Valve | 1 13/16 | |




CONTRACTOR'S OPTION TO FURNISH:

1. All equipment and connections above Braden head or casing head. Working pressure of preventers to be 2000-psi minimum.
2. Automatic accumulator (80 gallon, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure.
3. BOP controls, to be located near drillers' position.
4. Kelly equipped with Kelly cock.
5. Inside blowout preventer or its equivalent on derrick floor at all times with proper threads to fit pipe being used.
6. Kelly saver-sub equipped with rubber casing protector at all times.
7. Plug type blowout preventer tester.
8. Extra set pipe rams to fit drill pipe in use on location at all times.
9. Type RX ring gaskets in place of Type R.

COG TO FURNISH:

1. Braden head or casing head and side valves.
2. Wear bushing. If required.

GENERAL NOTES:

1. Deviations from this drawing may be made only with the express permission of COG's Drilling Manager.
2. All connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through choke valves must be full opening and suitable for high pressure mud service.
3. Controls to be of standard design and each marked, showing opening and closing position
4. Chokes will be positioned so as not to hamper or delay changing of choke beans. Replaceable parts for adjustable choke, or bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.
5. All valves to be equipped with hand-wheels or handles ready for immediate use.
6. Choke lines must be suitably anchored.
7. Hand wheels and extensions to be connected and ready for use.
8. Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
9. All seamless steel control piping (2000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
10. Casing head connections shall not be used except in case of emergency.
11. Do not use kill line for routine fill up operations.

**United State Department of the Interior**

**BUREAU OF LAND MANAGEMENT**
**Roswell Resource Area**
**P.O. Drawer 1857**
**Roswell, New Mexico 88202-1857**

## Statement Accepting Responsibility for Operations

**Operator name:** COG Operating LLC
**Street or box :** 550 W. Texas, Suite 1300
**City, State :** Midalnd, TX
**Zip Code, :** 79701

**The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:**

**Lease No.:** LC-029509A MC Federal #9

**Legal Description of land:** Sec 21 T17S R32E SE/4 NW/4

**Formation(s) (if applicable):** Maljamar;Abo

**Bond Coverage: (State if individually bonded or another's bond)**
**Statewide Bond**

**BLM Bond File No.:** NMB000215

**Authorized Signature:** Jerry W. Sherrell
Jerry W. Sherrell

**Title:** Production Clerk

**Date:** 5/15/2006

## CONDITIONS OF APPROVAL - DRILLING

**Well Name & No.** 9– MC FEDERAL
**Operator's Name:** COG OPERATING LLC
**Location:** 2085' FNL & 1875' FWL – SEC 21 – T17S – R32E – LEA COUNTY
**Lease:** LC-029509A

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 234-5909 or (505) 361-2822 (After hours) - for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding
B. Cementing casing: **13-3/8** inch **8-5/8** inch **5-1/2** inch
C. BOP tests

2 Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing ( size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

### II. CASING:

1. The **13-3/8** inch surface casing shall be set at **650 feet** and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string. **Note: The operator will use the Alternative Conditions of Approval – Drilling (attached). Fresh water or fresh water mud shall be used while drilling to a depth of 800 feet.**

2. The minimum required fill of cement behind the **8-5/8** inch salt protection casing is **circulate cement to the surface.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is **cement shall tie back 200 feet into the 8-5/8 inch casing.**

### III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the **13-3/8** inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) is **3000** psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.

# ALTERNATIVE CONDITIONS OF APPROVAL - DRILLING

Drilling Fluids, Casing and Cementing Requirements for Most of Lea County:

Casing and Cementing

Surface casing is to be set at a sufficient depth to protect useable water zones and cement circulated to surface. In areas where the salt section (Salado) is present, surface casing should be set at least 25 feet into the top of the Rustler Anhydrite and cement circulated to the surface.

As an alternative, surface casing may be set through the Santa Rosa Formation or other potable water bearing zones and circulate cement to surface. For wells requiring an intermediate casing string, such string shall be cemented to the ground surface. In the case where intermediate casing is not required the operator shall case and cement the production hole to the ground surface.

While drilling from the surface casing to the Rustler formation it is recommended that operators periodically sweep the hole with viscous low water loss pills to help build a filter cake across useable water zones in the redbeds.

Drilling Fluid

Fresh water or fresh water spud mud shall be used to drill to surface casing depth. If surface casing is set at a lesser depth than the top of the Rustler formation., fresh water spud mud may be used to drill down to the first salt in the Rustler Formation. after which brine or fresh water may be used.

Non-toxic or biodegradable water based polymers, drilling paper, starch and gels may be used in the mud system in order to retard seepage into the redbeds.

Two to five percent diesel or crude oil may be used in the redbed section in order to control heaving shales and mudstones.

Caustics and Lime shall not be used in the red beds but may be added when the Rustler formation is reached. However, sodium carbonate maybe used for alkalinity or ph control while drilling the redbeds above the Rustler formation.

Additionally, questions of whether an additive may be used should be referred to the Roswell Field office.

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 8741 0
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Fonn C-144
June 1, 2004

**For drilling and production facilities,** submit to appropriate NNIOCD District Office.
**For downstream facilities,** submit to Santa Fe office

# Pit or Below-Grade Tank Re.gistration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒
Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: COG Operating LLC Telephone: (432) 685-4372 e-mail address: DKuykendall@conchoresources.com
Address: 550 W. Texas, Suite 1300 Midland, TX 79701
Facility or well name: MC Federal #9 API #- 30-025-31967 U/L or Qtr/Qtr F See 21 T 17S R 32E
County: Lea Latitude _____ Longitude _____ NAD: 1927 ☐ 1983 ☐
Surface Owner: Federal ☒ State ☐ Private ☐ Indian ☐

| Pit | Below-grade tan | |
|---|---|---|
| Type: Drilling ☒ Production ☐ Disposal ☐<br>Workover ☐ Emergency ☐<br>Lined ☒ Unlined ☐<br>Liner type: Synthetic ☒ Thickness 12 mil Clay ☐<br>Pit Volume 2000 bbl | Volume: ____bbl Type of fluid: _____<br>Construction material: _____<br>Double-walled, with leak detection? Yes ☐ If not, explain why not. | |
| Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) | Less than 50 feet<br>50 feet or more, but less than 100 feet<br>100 feet or more | (20 points)<br>(10 points)<br>( 0 points) 0 Points |
| Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1 000 feet from all other water sources.) | Yes<br>No | (20 points)<br>( 0 points) 0 Points |
| Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.) | Less than 200 feet<br>200 feet or more, but less than 1 000 feet<br>1000 feet or more | (20 points)<br>(10 points)<br>( 0 points) 0 Points |
| | **Ranking Score (Total Points)** | 0 Points |

**If this is a pit closure:** (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if your are burying in place) onsite ☐ offsite ☐ If offisite, name of facility_____ (3) Attach a general description ofremedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface_____ft. and attach sample results.
(5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

I hereby certify that the information above is true and complete to the best ofmy knowledge and belief. **I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐**

Date: 6/21/2006
Printed Name/Title Jerry W. Sherrell/Production Clerk Signature Jerry W. Sherrell

Your certification and NMOCD approval ofthis application/closure does not relieve the operator of liability should the contents ofthe pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator ofits responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:
Printed Name/Title PETROLEUM ENGINEER Signature _____ Date: JUN 2 2 2006

JUN 2 2 2006

JUN 2 2 2006

The sender of this message has requested a read receipt. Click here to send a receipt.

**Mull, Donna, EMNRD**

**From:** Phillips, Dorothy, EMNRD **Sent:** Thu 6/22/2006 8:29 AM
**To:** Mull, Donna, EMNRD
**Cc:**
**Subject:** RE: Financial Assurance Requirement
**Attachments:**

Plantation has to submit a one well bond for 30-025-25962 according to Jane's list.
All of the have a blanket bond and the rest do not appear on Jane's list.

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**From:** Mull, Donna, EMNRD
**Sent:** Thursday, June 22, 2006 8:13 AM
**To:** Phillips, Dorothy, EMNRD
**Cc:** Macquesten, Gail, EMNRD; Sanchez, Daniel J., EMNRD
**Subject:** Financial Assurance Requirement

Dorothy,

Is the Financial Assurance Requirement for these Operators OK?

Plantation Operating LLC (237788)
COG Operating LLC (229137)
Range Operating New Mexico Inc (227588)
Pogo Producing Co (17891)

I have checked the Inactive well list for each Operator.

Please let me know. Thanks and have a nice day. Donna