

OCD-ARTESIA

ATS-08-118
ET-08-1146Form 3160-3
(February 2005)

AUG - 6 2008

OCD-ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

| | | |
|---|---|---|
| 1a. Type of work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 5. Lease Serial No. NM 400844 95630 |
| 1b. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone | | 6. If Indian, Allottee or Tribe Name N/A |
| 2. Name of Operator COG OPERATING, LLC 229137 | | 7. If Unit or CA Agreement, Name and No |
| 3a. Address 550 W. Texas Suite 1300 Midland, Texas 79701 | | 8. Lease Name and Well No. 37327 Blackhawk "11" Federal Com #1 |
| 3b. Phone No. (include area code) 432-683-7443 | | 9. API Well No. 30-015-36541 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 430' FSL & 430' FWL At proposed prod zone 330' FSL & 330' FEL | | 10. Field and Pool, or Exploratory Wolfcamp- Crow Flats |
| 14. Distance in miles and direction from nearest town or post office* | | 11. Sec, T R N. or Blk and Survey or Area Section 11 T16S R28E |
| 15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg. unit line, if any) 330' | 16. No. of acres in lease | 12. County or Parish Eddy County |
| 17. Spacing Unit dedicated to this well 160 | 19. Proposed Depth 11130' MD 6680' TVD | 13. State NM |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft | 20. BLM/BIA Bond No. on file NMB 000215 | |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3570 GL | 22. Approximate date work will start* 06/01/2008 | 23. Estimated duration 45 days |

24. Attachments

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

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor | 4. Bond to cover the operations unless covered by an existing bond on file (see item 20 above) |
| 2. A Drilling Plan | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office) | 6. Such other site specific information and/or plans as may be required by the BLM. |

| | | |
|--------------------------------------|---|--------------------|
| 25. Signature <i>Lee Ann Rollins</i> | Name (Printed Typed) Lee Ann Rollins | Date 04/30/2008 |
| Title Agent | | |

| | | |
|--|---|---------------------------------|
| Approved by (Signature) <i>/s/ James Stovall</i> | Name (Printed Typed) <i>/s/ James Stovall</i> | Date <i>AUG 04 2008</i> |
| 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 States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

NOTE: NEW PIT RULE

19-15-17 NMAC PART 17

A form C-144 must be approved before starting drilling operations.

*(Instructions on page 2)

ROSWELL CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHEDBefore the Oil Conservation Division
Case Nos. 14323, 14382, 14365 & 14366
Hearing May 20, 2010
Chesapeake Energy Corporation &
Chesapeake Operating, Inc.

Exhibit No. _____

BH11#1 0001

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

C.O.G. Operating, LLC (229137)
550 W. Texas Avenue, Ste. 1300
Midland, TX 79701

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

Lease No – Surface Location: State Of New Mexico
Lease No – Bottom Hole Location: NM 103873

Well Name: Blackhawk "11" Federal #1

Legal Description of Land: SL: 430' FSL & 430' FWL, Unit M
BHL: 330' FSL & 330' FWL, Unit P
Sec 11, T16S, R28E
Eddy County, New Mexico


Formation(s) (if applicable): Wolfcamp – Crow Flats

Bond Coverage: \$25,000 statewide bond of C.O.G. Operating, LLC

BLM Bond File No: NMB 000215

Date

5-2-08


John Coffman

C.O.G. Operating, LLC

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other Instructions on reverse side.

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

AUG - 6 2008

2. Name of Operator
COG Operating LLC

OCD-ARTESIA

3a. Address
550 W. Texas Ave., Suite 1300 Midland, TX 797013b. Phone No. (include area code)
432-685-4340

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

VARIOUS NM COUNTY LOCATIONS

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

9. API Well No.

10. Field and Pool, or Exploratory Area

11. County or Parish, State

Various NM Counties

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | | |
|--|---|---|--|---|
| <input checked="" type="checkbox"/> Notice of Intent | <input type="checkbox"/> Acidize | <input type="checkbox"/> Deepen | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Subsequent Report | <input type="checkbox"/> Alter Casing | <input type="checkbox"/> Fracture Treat | <input type="checkbox"/> Reclamation | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Final Abandonment Notice | <input type="checkbox"/> Casing Repair | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete | <input type="checkbox"/> Other Drill with |
| | <input type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon | Closed Loop |
| | <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back | <input type="checkbox"/> Water Disposal | System |

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

COG Operating LLC respectfully requests permission to drill the attached list of Eddy County wells with a closed loop system.

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Phyllis Edwards

Title Regulatory Analyst

Signature

Date

06/23/2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

SEPS

Date

6-27-08

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. 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)

CLOSED LOOP SYSTEM - ATTACHMENT TO BLM SUNDRY DATED 6-23-08

| WELL NAME | CTY | LEASE # | API # | FOOTAGES | SECTION, TWN, RNG, UL |
|-----------------------------|--------|----------|------------|--------------------|----------------------------|
| Andromeda Federal #1H | Chaves | NM105887 | 3000527975 | 660 FNL, 330 FEL | Sec 14, T15S, R31E, Unit A |
| Andromeda Federal #2H | Chaves | NM105887 | 3000527976 | 1980 FNL, 850 FEL | Sec 14, T15S, R31E, Unit H |
| Andromeda Federal #3H | Chaves | NM105887 | 3000527977 | 1650 FSL, 330 FWL | Sec 14, T15S, R31E, Unit L |
| Gemini Federal #1H | Chaves | NM105886 | 3000527972 | 330 FSL, 330 FEL | Sec 12, T15S, R31E, Unit P |
| Hercules Federal Com #2H | Chaves | NM105885 | | 660 FNL, 430 FWL | Sec 15, T15S, R31E, Unit D |
| Hercules Federal Com #3H | Chaves | NM105885 | | 1980 FSL, 430 FWL | Sec 15, T15S, R31E, Unit L |
| Hercules Federal Com #4H | Chaves | NM105885 | | 660 FSL, 330 FEL | Sec 15, T15S, R31E, Unit P |
| Orion Federal #1H | Chaves | NM105887 | 3000527978 | 1980 FNL, 330 FEL | Sec 13, T15S, R31E, Unit H |
| Orion Federal #2H | Chaves | NM105887 | 3000527994 | 1980 FSL, 330 FEL | Sec 13, T15S, R31E, Unit I |
| Orion Federal #3H | Chaves | NM105887 | 3000528001 | 660 FSL, 330 FEL | Sec 13, T15S, R31E, Unit P |
| Polaris Federal #1 | Chaves | NM105885 | 3000527999 | 1980 FNL, 330 FWL | Sec 15, T15S, R31E, Unit E |
| Taurus Federal #1H | Chaves | NM105885 | 3000528000 | 330 FSL, 330 FWL | Sec 10, T15S, R31E, Unit M |
| Blue Thunder 5 Fed #2 | Eddy | LC069033 | 3001535550 | 1200 FNL, 1980 FWL | Sec 5, T19S, R31E, Unit C |
| Blackhawk 11 Federal 1 | Eddy | NM103876 | | 430 FSL, 430 FWL | Sec 11, T16S, R28E, Unit M |
| Blitzen 35 Federal 1 | Eddy | NM103876 | 3001536044 | 330 FNL, 990 FEL | Sec 35, T16S, R28E, Unit A |
| Blitzen 35 Federal 2 | Eddy | NM103876 | 3001536058 | 1800 FNL, 330 FEL | Sec 35, T16S, R28E, Unit H |
| Caribou 19 Federal #1 | Eddy | NM103872 | | 430 FSL, 430 FEL | Sec 19, T16S, R28E, Unit P |
| Caribou 19 Federal #2 | Eddy | NM103872 | | 1980 FSL, 790 FEL | Sec 19, T16S, R28E, Unit I |
| Comet 22 Federal #1 | Eddy | NM100844 | 3001535832 | 660 FSL, 330 FWL | Sec 22, T16S, R28E, Unit |
| Comet 22 Federal #2 | Eddy | NM100844 | 3001535818 | 1980 FSL, 330 FWL | Sec 22, T16S, R28E, Unit |
| Comet 22 Federal #3 | Eddy | NM100844 | 3001535821 | 1980 FNL, 330 FWL | Sec 22, T16S, R28E, Unit |
| Comet 22 Federal #4 | Eddy | NM100844 | 3001535716 | 330 FNL, 1650 FWL | Sec 22, T16S, R28E, Unit C |
| Donner 30 Federal #1 | Eddy | NM054856 | 3001535826 | 330 FSL, 330 FEL | Sec 30, T16S, R28E, Unit |
| Donner 30 Federal #2 | Eddy | NM054856 | 3001535819 | 1800 FSL, 330 FEL | Sec 30, T16S, R28E, Unit |
| Donner 30 Federal #3 | Eddy | NM054856 | 3001535807 | 1800 FNL, 1980 FEL | Sec 30, T16S, R28E, Unit |
| Donner 30 Federal #4 | Eddy | NM054856 | 3001535715 | 330 FNL, 330 FEL | Sec 30, T16S, R28E, Unit A |
| High Lonesome 23 Fed Com 1H | Eddy | LC118710 | 3001535949 | 900 FSL, 330 FEL | Sec 23, T16S, R29E, Unit P |
| High Lonesome 26 Fed Com 1H | Eddy | LC118710 | 3001535893 | 660 FNL, 1150 FEL | Sec 26, T16S, R29E, Unit A |
| High Lonesome 26 Fed Com 2H | Eddy | LC118710 | 3501535894 | 2030 FNL, 530 FEL | Sec 26, T16S, R29E, Unit H |
| Reindeer 21 Federal #3 | Eddy | NM100844 | 77874 | 1980 FNL, 430 FWL | Sec 21, T16S, R28E, Unit E |
| Reindeer 21 Federal #4 | Eddy | NM100844 | | 1980 FSL, 430 FWL | Sec 21, T16S, R28E, Unit L |
| Eagle Feather State #1 | Lea | LC13430 | 3002538272 | 1650 FSL, 1600 FEL | Sec 16, T26S, R36E, Unit J |
| Eagle Feather State #2 | Lea | LC13430 | 3002538885 | 660 FNL, 1630 FEL | Sec 21, T26S, R36E, Unit H |

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

1820 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources DepartmentForm C-102
Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

AUG 15 2008

OCD-ARTESIA AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|-----------------------|---|------------------------------------|
| API Number 30-015- | Pool Code 97102 | Pool Name CROW FLATS: WOLF CAMP |
| Property Code | Property Name BLACKHAWK "11" FEDERAL COM | Well Number 1 |
| OGRID No. 229137 | Operator Name C.O.G. OPERATING L.L.C. | Elevation 3570' |

Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| M | 11 | 16 S | 28 E | | 430 | SOUTH | 430 | WEST | EDDY |

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 |
|------------------------|-----------------|--------------------|-----------|---------|---------------|------------------|---------------|----------------|--------|
| P | 11 | 16 S | 28 E | | 330 | SOUTH | 330 | EAST | EDDY |
| Dedicated Acres 160 | Joint or Infill | Consolidation Code | Order No. | | | | | | |

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

| | |
|---|--|
| <p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Phyllis A. Edwards</i> 8-14-08 Signature Date</p> <p>Phyllis A. Edwards Printed Name Regulatory Analyst</p> | |
| <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>DECEMBER 16, 2007 Date Surveyed</p> <p><i>Gary L. Jones</i> Signature of Surveyor Professional Surveyor</p> <p>W.C. Jones Professional Surveyor</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p> | |

SURFACE LOCATION
LAT.: N 32°55'55.47"
LONG.: W104°09'13.98"
SPC- N.: 702870.627
E.: 596395.029
(NAD-83)

BOTTOM HOLE LOCATION
LAT.: N 32°55'54.42"
LONG.: W104°08'21.77"
SPC- N.: 702772.089
E.: 600844.111
(NAD-83)

PROJECT AREA

PRODUCING AREA

PENETRATION POINT

3572.6' 3571.1'
430' 430'
621' 621'
3572.4' 3564.6'

**ATTACHMENT TO FORM 3160-3
COG Operating LLC
Blackhawk "11" Federal Com # 1
SL: 430' FSL & 430' FWL Unit M
BHL: 330' FSL & 330' FEL Unit P
Sec 11, T16S, R28E
Eddy County, NM**

1. Proration Unit Spacing: 160 Acres
2. Ground Elevation: 3570'
3. Proposed Depths: Pilot hole TD = 6835', Horizontal TVD = 6680', Horizontal MD = 11130'
4. Estimated tops of geological markers:

| | |
|--------------------|---------|
| Quaternary | Surface |
| Yates/Seven Rivers | 385' |
| Queens | 1120' |
| San Andres | 1850' |
| Glorietta | 3375' |
| Abo | 5370' |
| Wolfcamp | 6585' |

5. Possible mineral bearing formations:

| | | |
|------------|-------------|-------|
| Water Sand | Fresh Water | 150' |
| San Andres | Oil / Gas | 1850' |
| Glorietta | Oil / Gas | 3375' |
| Abo | Oil / Gas | 5370' |
| Wolfcamp | Oil / Gas | 6585' |

6. Casing Program

| <u>Hole size</u> | <u>Interval</u> | <u>OD of Casing</u> | <u>Weight</u> | <u>Cond.</u> | <u>Collar</u> | <u>Grade</u> |
|---|-----------------------------------|---------------------|---------------|--------------|---------------|--------------|
| 17-1/2" | 0' - +/-500' | 13-3/8" | 48# | New | STC | H40 |
| Collapse sf - 2.98, Burst sf - 2.33, Tension sf - 13.42 | | | | | | |
| 12 1/4" | 0' - 2300' | 9-5/8" | 40# | New | STC | J-55 |
| Collapse sf - 2.46, Burst sf - 1.35, Tension sf - 6.48 | | | | | | |
| 8-3/4" | 0' - 6000'MD | 5-1/2" | 17# | New | LTC | L-80 |
| Collapse sf - 2.08, Burst sf - 2.35, Tension sf - 2.92 | | | | | | |
| 7-7/8" | 6000' - ¹⁰⁸⁵⁶ 11130'MD | 5-1/2" | 17# | New | BTC | L-80 |
| Collapse sf - 1.85, Burst sf - 2.28, Tension sf - 29.19 | | | | | | |

**ATTACHMENT TO FORM 3160-3
COG Operating LLC
Blackhawk "11" Federal Com # 1
Page 2 of 3**

7. Cement Program

13 3/8" Surface Casing set at +/- 500', Circ to Surf with +/- 500 sx Class "C" w/ 2% CaCl₂, 1.35 yd.

9 5/8" Intermediate Casing set at +/- 2300', Circ. to Surf with +/- 700 sx 50/50 Poz "C", 2.45 yd. & 200 sx Class "C" w/ 2% CaCl₂, 1.35 yd.

5 1/2" Production Casing set at +/- 11130' MD, 6680' TVD, Cement with +/- 200 sx. 50/50/2 "C", 1.37 yd & +/- 650 sx Class "H", 1.18 yd. Est. TOC @ 6000'. *See COA*

8. Pressure Control Equipment:

After setting 13 3/8" casing and installing 3000 psi casing head, NU 13 5/8" 3000 psi annular BOP. Test annular BOP, casing and manifold with clear fluid to 1000 psi w/ rig pump.

After setting 9 5/8" casing and installing 3000 psi casing spool, NU 3000 psi double ram BOP and 3000 psi annular BOP. Test double ram BOP and manifold to 3000# with clear fluid and annular to 1500 psi using an independent tester, this equipment will be used continuously until TD is reached. Blind rams will be operationally checked on each trip out of hole. Pipe rams will be operationally checked each 24 hour period. These checks will be noted on daily tour sheets. Other accessories to the BOP equipment include a Kelly cock and floor safety valves, choke lines and choke manifold with 3000 psi WP rating.

9. Proposed Mud Circulating System

| Interval | Mud Wt. | Visc. | FL | Type Mud System |
|--|---------|-------|----|---|
| 0' - 500' | 8.5 | 28 | NC | Fresh water native mud w/ paper for seepage and sweeps. Lime for PH. |
| <i>500' - 1800'</i> <i>2300</i> | 9.1 | 30 | NC | Cut brine mud, lime for PH and paper for seepage and sweeps. <i>See COA</i> |
| <i>1800' - 5300'</i> <i>2300</i> | 9.1 | 29 | NC | Drill section with fresh water/cut brine circulating the reserve utilizing periodic sweeps of paper as needed for seepage control and solids removal. |
| <i>5300' - 10856'</i> <i>11130'</i> | 9.5 | 36 | 10 | Drill horizontal section with XCD polymer / cut brine / starch. |

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.

10. Production Hole Drilling Summary:

Drill 8-3/4" hole thru Wolfcamp, run open hole logs. Spot 150 sx. "H" Kick off plug from +/- 6500' to +/- 6100'. Time drill and kick off 7-7/8" hole at +/- 6100', building curve over +/- 475' to horizontal at 6610' TVD. Drill horizontal section in an easterly direction for +/- 4500' lateral. Run production casing and cement.

ATTACHMENT TO FORM 3160-3
COG Operating LLC
Blackhawk "11" Federal # 1
Page 3 of 3

11. 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.
-

12. 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. in Pilot hole to 9 5/8" casing shoe.
- B. The mud logging program will consist of lagged 10' samples from intermediate casing point to T.D. in vertical pilot hole and from Kick off point to TD in Horizontal hole.
- C. Drill Stem test is not anticipated.
- D. No conventional coring is anticipated.
- E. Further testing procedures will be determined after the 5 1/2" production casing has been cemented at TD based on drill shows and log evaluation.

13. 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 2838 psig. Low levels of Hydrogen sulfide have been monitored in producing wells in the area, so H2S may be present while drilling of the well. An H2S plan is attached to the Drilling Program. No major loss of circulation zones has been reported in offsetting wells.

14. Anticipated Starting Date

Drilling operations will commence approximately on July 1, 2008 with drilling and completion operations lasting approximately 45 days.

COG Operating LLC

Eddy County

S11T16S R28E

Blackhawk 11 Federal Com 1

Original Hole

Plan: Plan #1

Pathfinder Survey Report

21 February, 2008

True North: -0.10°
Magnetic North: 8.19°
Magnetic Field
Strength: 49331.55nT
Dip Angle: 60.83°
Date: 2/27/2008
Model: KSRF200510

Project: Eddy County
Sta: S11 T16S R28E
Well: Blackhawk 11 Federal Com 1
Wellbore: Original Hole
Blackhawk 11 Federal Com 1(Original Hole)

PATHFINDER

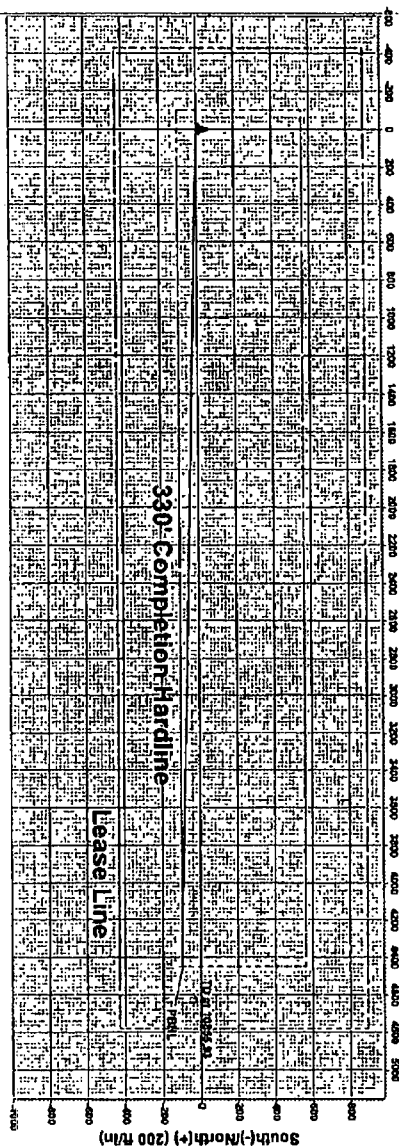
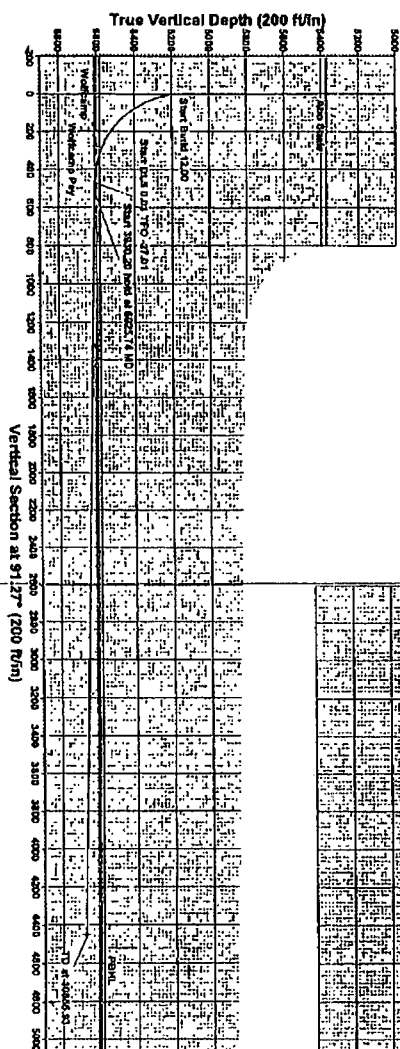
ENERGY SERVICES

PROJECT DETAILS: Eddy Canyon
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid

| WELLBORE TRACKER DETAILS (WOB COORDINATES) | | | | |
|--|---------|-------|------------------------|----------------------|
| Name | WOB | +N/S | +E/W | Shape Point |
| TYO | 4680.00 | 48.54 | Northing 702772.689 | Easting 80064.111 |
| PRM | | | | |

West-Measd+) (200 ft/in)

| TECHNICAL SPECS | PERFORMANCE |
|-----------------|-------------|
| 334.00 | 28.00 |
| 1720.00 | 1120.00 |
| 1880.00 | 320.00 |
| 2378.00 | 1374.00 |
| 5770.00 | 5370.00 |
| 6880.00 | 6777.75 |
| 5870.00 | 6374.75 |



Penn. Plan 91 (Buckharte 11 Federal Conn 1/Original Note)
 Created By: Matt Friedman Date: 14 Dec, February 21 2000
 Director: _____ Date: _____

WHS
Pathfinder Survey Report

| | | | |
|-----------|----------------------------|------------------------------|---------------------------------|
| Company: | COG Operating LLC | Local Co-ordinate Reference: | Well Blackhawk 11 Federal Com 1 |
| Project: | Eddy County | TVD Reference: | EST RKB @ 3570.00ft |
| Site: | S11 T16S R28E | MD Reference: | EST RKB @ 3570.00ft |
| Well: | Blackhawk 11 Federal Com 1 | North Reference: | Grid |
| Wellbore: | Original Hole | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 2003.16 Single User Db |

| | | | |
|-------------|---------------------------|---------------|----------------|
| Project: | Eddy County | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | New Mexico Eastern Zone | | |

| | | | | | | |
|-----------------------|-----|---------------|----------------|------------|-------------------|--------|
| Site: | | S11 T16S R28E | | | | |
| Site Position: | | Northing: | 702,870.627 ft | Latitude: | 32° 55' 55.470 N | |
| From: | Map | Easting: | 696,395.029 ft | Longitude: | 104° 9' 13.977 W | |
| Position Uncertainty: | | 0.00 ft | Spot Radius: | " | Grid Convergence: | 0.10 ° |

| | | | | | | |
|----------------------|----------------------------|---------------------|-----------|----------------|-------------|------------------|
| Well: | Blackhawk 11 Federal Com 1 | | | | | |
| Well Position | +N-S | 0.00 ft | Northing: | 702,870.627 ft | Latitude: | 32° 55' 55.470 N |
| | +E-W | 0.00 ft | Easting: | 596,395.029 ft | Longitude: | 104° 9' 13.977 W |
| Position Uncertainty | 0.00 ft | Wellhead Elevation: | ft | Ground Level: | 3,570.00 ft | |

| | | | | | |
|-----------|---------------|-------------|--------------------|------------------|------------------------|
| Wellbore: | Original Hole | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF200510 | 2/21/2008 | 8.29 | 60.83 | 49,331 |

| | | | | |
|-------------------|------------------|------|---------------|-----------|
| Design: | Plan #1 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) | +N/S | +E/W | Direction |
| | (ft) | (ft) | (ft) | (°) |
| | 0.00 | 0.00 | 0.00 | 91.27 |

| | | | | |
|---------------------|-----------|-------------------------|-----------|----------------|
| Survey Tool Program | | Date 2/21/2008 | | |
| From | To | Survey (Wellbore) | Tool Name | Description |
| (ft) | (ft) | | | |
| 0.00 | 10,855.86 | Plan #1 (Original Hole) | MWD | MWD - Standard |

| Planned Survey | | | | | | | | |
|----------------|------------|------------|-------------|-------------|-------------|----------------|--------------------|--|
| MD (ft) | Inc (°) | Azi (°) | TVD (ft) | N/S (ft) | E/W (ft) | V. Sec (ft) | D Leg (°/100ft) | |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 400.00 | 0.00 | 0.00 | 400.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 600.00 | 0.00 | 0.00 | 600.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 700.00 | 0.00 | 0.00 | 700.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 800.00 | 0.00 | 0.00 | 800.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 900.00 | 0.00 | 0.00 | 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,100.00 | 0.00 | 0.00 | 1,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | |

WHS
Pathfinder Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | COG Operating LLC | Local Co-ordinate Reference: | Well Blackhawk 11 Federal Com 1 |
| Project: | Eddy County | TVD Reference: | EST RKB @ 3570.00ft |
| Site: | S11 T16S R28E | MD Reference: | EST RKB @ 3570.00ft |
| Well: | Blackhawk 11 Federal Com 1 | North Reference: | Grid |
| Wellbore: | Original Hole | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 2003.16 Single User Db |

| Planned Survey | | | | | | | | |
|----------------|-------------|------------|-------------|-------------|-------------|----------------|--------------------|--|
| MD (ft) | Inc. (°) | Azi (°) | TVD (ft) | N/S (ft) | E/W (ft) | V. Sec (ft) | DLeg (ft/100ft) | |
| 1,200.00 | 0.00 | 0.00 | 1,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,300.00 | 0.00 | 0.00 | 1,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,400.00 | 0.00 | 0.00 | 1,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,500.00 | 0.00 | 0.00 | 1,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,600.00 | 0.00 | 0.00 | 1,600.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,700.00 | 0.00 | 0.00 | 1,700.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,800.00 | 0.00 | 0.00 | 1,800.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,900.00 | 0.00 | 0.00 | 1,900.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,000.00 | 0.00 | 0.00 | 2,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,100.00 | 0.00 | 0.00 | 2,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,200.00 | 0.00 | 0.00 | 2,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,300.00 | 0.00 | 0.00 | 2,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,400.00 | 0.00 | 0.00 | 2,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,500.00 | 0.00 | 0.00 | 2,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,600.00 | 0.00 | 0.00 | 2,600.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,700.00 | 0.00 | 0.00 | 2,700.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,800.00 | 0.00 | 0.00 | 2,800.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,900.00 | 0.00 | 0.00 | 2,900.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,000.00 | 0.00 | 0.00 | 3,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,100.00 | 0.00 | 0.00 | 3,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,200.00 | 0.00 | 0.00 | 3,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,300.00 | 0.00 | 0.00 | 3,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,400.00 | 0.00 | 0.00 | 3,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,500.00 | 0.00 | 0.00 | 3,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,600.00 | 0.00 | 0.00 | 3,600.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,700.00 | 0.00 | 0.00 | 3,700.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,800.00 | 0.00 | 0.00 | 3,800.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,900.00 | 0.00 | 0.00 | 3,900.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,000.00 | 0.00 | 0.00 | 4,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,100.00 | 0.00 | 0.00 | 4,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,200.00 | 0.00 | 0.00 | 4,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,300.00 | 0.00 | 0.00 | 4,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,400.00 | 0.00 | 0.00 | 4,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,500.00 | 0.00 | 0.00 | 4,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,600.00 | 0.00 | 0.00 | 4,600.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,700.00 | 0.00 | 0.00 | 4,700.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,800.00 | 0.00 | 0.00 | 4,800.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,900.00 | 0.00 | 0.00 | 4,900.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,000.00 | 0.00 | 0.00 | 5,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,100.00 | 0.00 | 0.00 | 5,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,200.00 | 0.00 | 0.00 | 5,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,300.00 | 0.00 | 0.00 | 5,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,400.00 | 0.00 | 0.00 | 5,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,500.00 | 0.00 | 0.00 | 5,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | |

WHS
Pathfinder Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | COG Operating LLC | Local Co-ordinate Reference: | Well Blackhawk 11 Federal Com 1 |
| Project: | Eddy County | TVD Reference: | EST RKB @ 3570.00ft |
| Site: | S11 T16S R28E | MD Reference: | EST RKB @ 3570.00ft |
| Well: | Blackhawk 11 Federal Com 1 | North Reference: | Grid |
| Wellbore: | Original Hole | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 2003.16 Single User Db |

| Planned Survey | | | | | | | | |
|----------------|------------|------------|-------------|-------------|-------------|----------------|---------------------|--|
| MD (ft) | Inc (°) | Azi (°) | TVD (ft) | N/S (ft) | E/W (ft) | V. Sec (ft) | D Leg (ft/100ft) | |
| 5,600.00 | 0.00 | 0.00 | 5,600.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,700.00 | 0.00 | 0.00 | 5,700.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,800.00 | 0.00 | 0.00 | 5,800.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,900.00 | 0.00 | 0.00 | 5,900.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,000.00 | 0.00 | 0.00 | 6,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,100.00 | 0.00 | 0.00 | 6,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,132.61 | 0.00 | 0.00 | 6,132.61 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,150.00 | 2.09 | 91.27 | 6,150.00 | -0.01 | 0.32 | 0.32 | 12.00 | |
| 6,175.00 | 5.09 | 91.27 | 6,174.94 | -0.04 | 1.88 | 1.88 | 12.00 | |
| 6,200.00 | 8.09 | 91.27 | 6,199.78 | -0.11 | 4.75 | 4.75 | 12.00 | |
| 6,225.00 | 11.09 | 91.27 | 6,224.42 | -0.20 | 8.91 | 8.91 | 12.00 | |
| 6,250.00 | 14.09 | 91.27 | 6,248.82 | -0.32 | 14.35 | 14.38 | 12.00 | |
| 6,275.00 | 17.09 | 91.27 | 6,272.90 | -0.47 | 21.07 | 21.07 | 12.00 | |
| 6,300.00 | 20.09 | 91.27 | 6,296.59 | -0.64 | 29.04 | 29.04 | 12.00 | |
| 6,325.00 | 23.09 | 91.27 | 6,319.84 | -0.85 | 38.23 | 38.24 | 12.00 | |
| 6,350.00 | 26.09 | 91.27 | 6,342.57 | -1.08 | 48.63 | 48.64 | 12.00 | |
| 6,375.00 | 29.09 | 91.27 | 6,364.72 | -1.33 | 60.20 | 60.22 | 12.00 | |
| 6,400.00 | 32.09 | 91.27 | 6,386.24 | -1.62 | 72.92 | 72.94 | 12.00 | |
| 6,425.00 | 35.09 | 91.27 | 6,407.06 | -1.92 | 86.74 | 86.76 | 12.00 | |
| 6,450.00 | 38.09 | 91.27 | 6,427.14 | -2.25 | 101.64 | 101.66 | 12.00 | |
| 6,475.00 | 41.09 | 91.27 | 6,446.40 | -2.61 | 117.56 | 117.59 | 12.00 | |
| 6,500.00 | 44.09 | 91.27 | 6,464.80 | -2.98 | 134.48 | 134.51 | 12.00 | |
| 6,525.00 | 47.09 | 91.27 | 6,482.30 | -3.38 | 152.33 | 152.36 | 12.00 | |
| 6,550.00 | 50.09 | 91.27 | 6,498.83 | -3.79 | 171.07 | 171.11 | 12.00 | |
| 6,575.00 | 53.09 | 91.27 | 6,514.37 | -4.23 | 190.65 | 190.70 | 12.00 | |
| 6,600.00 | 56.09 | 91.27 | 6,528.85 | -4.68 | 211.02 | 211.07 | 12.00 | |
| 6,625.00 | 59.09 | 91.27 | 6,542.25 | -5.15 | 232.12 | 232.17 | 12.00 | |
| 6,650.00 | 62.09 | 91.27 | 6,554.53 | -5.63 | 253.89 | 253.95 | 12.00 | |
| 6,675.00 | 65.09 | 91.27 | 6,565.85 | -6.12 | 276.27 | 276.34 | 12.00 | |
| 6,700.00 | 68.09 | 91.27 | 6,575.58 | -6.63 | 299.20 | 299.27 | 12.00 | |
| 6,725.00 | 71.09 | 91.27 | 6,584.30 | -7.15 | 322.62 | 322.70 | 12.00 | |
| 6,750.00 | 74.09 | 91.27 | 6,591.78 | -7.68 | 346.47 | 346.55 | 12.00 | |
| 6,775.00 | 77.09 | 91.27 | 6,598.00 | -8.22 | 370.67 | 370.76 | 12.00 | |
| 6,800.00 | 80.09 | 91.27 | 6,602.95 | -8.76 | 395.17 | 395.27 | 12.00 | |
| 6,825.00 | 83.09 | 91.27 | 6,606.60 | -9.31 | 419.89 | 419.99 | 12.00 | |
| 6,850.00 | 86.09 | 91.27 | 6,608.96 | -9.86 | 444.77 | 444.88 | 12.00 | |
| 6,874.19 | 88.99 | 91.27 | 6,610.00 | -10.40 | 468.93 | 469.05 | 12.00 | |
| 6,900.00 | 88.99 | 91.27 | 6,610.46 | -10.97 | 494.73 | 494.85 | 0.01 | |
| 6,925.74 | 88.99 | 91.27 | 6,610.01 | -11.64 | 520.46 | 520.59 | 0.01 | |
| 7,000.00 | 88.99 | 91.27 | 6,612.21 | -13.18 | 594.69 | 594.84 | 0.00 | |
| 7,100.00 | 88.99 | 91.27 | 6,613.97 | -15.40 | 694.65 | 694.82 | 0.00 | |
| 7,200.00 | 88.99 | 91.27 | 6,615.73 | -17.61 | 794.61 | 794.80 | 0.00 | |
| 7,300.00 | 88.99 | 91.27 | 6,617.49 | -19.82 | 894.57 | 894.79 | 0.00 | |
| 7,400.00 | 88.99 | 91.27 | 6,619.25 | -22.04 | 994.53 | 994.77 | 0.00 | |

WHS
Pathfinder Survey Report

| | | | |
|-----------|----------------------------|------------------------------|---------------------------------|
| Company: | COG Operating LLC | Local Co-ordinate Reference: | Well Blackhawk 11 Federal Com 1 |
| Project: | Eddy County | TVD Reference: | EST RKB @ 3570.00ft |
| Site: | S11 T16S R28E | MD Reference: | EST RKB @ 3570.00ft |
| Well: | Blackhawk 11 Federal Com 1 | North Reference: | Grid |
| Wellbore: | Original Hole | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 2003.16 Single User Db |

| Planned Survey | | | | | | | | |
|----------------|------------|------------|-------------|-------------|-------------|----------------|-------------------|--|
| MD (ft) | Inc (°) | Azi (°) | TVD (ft) | N/S (ft) | E/W (ft) | V. Sec (ft) | DLeg (°/100ft) | |
| 7,500.00 | 88.99 | 91.27 | 6,621.00 | -24.25 | 1,094.49 | 1,094.76 | 0.00 | |
| 7,600.00 | 88.99 | 91.27 | 6,622.78 | -28.48 | 1,194.45 | 1,194.74 | 0.00 | |
| 7,700.00 | 88.99 | 91.27 | 6,624.52 | -28.68 | 1,294.41 | 1,294.73 | 0.00 | |
| 7,800.00 | 88.99 | 91.27 | 6,626.28 | -30.89 | 1,394.37 | 1,394.71 | 0.00 | |
| 7,900.00 | 88.99 | 91.27 | 6,628.04 | -33.10 | 1,494.33 | 1,494.70 | 0.00 | |
| 8,000.00 | 88.99 | 91.27 | 6,629.79 | -35.32 | 1,594.29 | 1,594.68 | 0.00 | |
| 8,100.00 | 88.99 | 91.27 | 6,631.55 | -37.53 | 1,694.25 | 1,694.67 | 0.00 | |
| 8,200.00 | 88.99 | 91.27 | 6,633.31 | -39.75 | 1,794.21 | 1,794.65 | 0.00 | |
| 8,300.00 | 88.99 | 91.27 | 6,635.07 | -41.96 | 1,894.17 | 1,894.63 | 0.00 | |
| 8,400.00 | 88.99 | 91.27 | 6,636.83 | -44.17 | 1,994.13 | 1,994.62 | 0.00 | |
| 8,500.00 | 88.99 | 91.27 | 6,638.58 | -46.39 | 2,094.09 | 2,094.60 | 0.00 | |
| 8,600.00 | 88.99 | 91.27 | 6,640.34 | -48.60 | 2,194.05 | 2,194.59 | 0.00 | |
| 8,700.00 | 88.99 | 91.27 | 6,642.10 | -50.81 | 2,294.01 | 2,294.57 | 0.00 | |
| 8,800.00 | 88.99 | 91.27 | 6,643.86 | -53.03 | 2,393.97 | 2,394.56 | 0.00 | |
| 8,900.00 | 88.99 | 91.27 | 6,645.62 | -55.24 | 2,493.93 | 2,494.54 | 0.00 | |
| 9,000.00 | 88.99 | 91.27 | 6,647.37 | -57.45 | 2,593.89 | 2,594.53 | 0.00 | |
| 9,100.00 | 88.99 | 91.27 | 6,649.13 | -59.67 | 2,693.85 | 2,694.51 | 0.00 | |
| 9,200.00 | 88.99 | 91.27 | 6,650.89 | -61.88 | 2,793.81 | 2,794.50 | 0.00 | |
| 9,300.00 | 88.99 | 91.27 | 6,652.65 | -64.10 | 2,893.77 | 2,894.48 | 0.00 | |
| 9,400.00 | 88.99 | 91.27 | 6,654.41 | -66.31 | 2,993.73 | 2,994.46 | 0.00 | |
| 9,500.00 | 88.99 | 91.27 | 6,656.16 | -68.52 | 3,093.69 | 3,094.45 | 0.00 | |
| 9,600.00 | 88.99 | 91.27 | 6,657.92 | -70.74 | 3,193.65 | 3,194.43 | 0.00 | |
| 9,700.00 | 88.99 | 91.27 | 6,659.68 | -72.95 | 3,293.61 | 3,294.42 | 0.00 | |
| 9,800.00 | 88.99 | 91.27 | 6,661.44 | -75.16 | 3,393.57 | 3,394.40 | 0.00 | |
| 9,900.00 | 88.99 | 91.27 | 6,663.19 | -77.38 | 3,493.53 | 3,494.39 | 0.00 | |
| 10,000.00 | 88.99 | 91.27 | 6,664.95 | -79.59 | 3,593.49 | 3,594.37 | 0.00 | |
| 10,100.00 | 88.99 | 91.27 | 6,666.71 | -81.80 | 3,693.45 | 3,694.36 | 0.00 | |
| 10,200.00 | 88.99 | 91.27 | 6,668.47 | -84.02 | 3,793.41 | 3,794.34 | 0.00 | |
| 10,300.00 | 88.99 | 91.27 | 6,670.23 | -86.23 | 3,893.37 | 3,894.33 | 0.00 | |
| 10,400.00 | 88.99 | 91.27 | 6,671.98 | -88.45 | 3,993.33 | 3,994.31 | 0.00 | |
| 10,500.00 | 88.99 | 91.27 | 6,673.74 | -90.66 | 4,093.29 | 4,094.29 | 0.00 | |
| 10,600.00 | 88.99 | 91.27 | 6,675.50 | -92.87 | 4,193.25 | 4,194.28 | 0.00 | |
| 10,700.00 | 88.99 | 91.27 | 6,677.26 | -95.09 | 4,293.21 | 4,294.26 | 0.00 | |
| 10,800.00 | 88.99 | 91.27 | 6,679.02 | -97.30 | 4,393.17 | 4,394.25 | 0.00 | |
| 10,855.93 | 88.99 | 91.27 | 6,680.00 | -98.54 | 4,449.08 | 4,450.17 | 0.00 | |

WHS
Pathfinder Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | COG Operating LLC | Local Co-ordinate Reference: | Well Blackhawk 11 Federal Com 1 |
| Project: | Eddy County | TVD Reference: | EST RKB @ 3570.00ft |
| Site: | S11 T16S R28E | MD Reference: | EST RKB @ 3570.00ft |
| Well: | Blackhawk 11 Federal Com 1 | North Reference: | Grid |
| Wellbore: | Original Hole | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan #1 | Database: | EDM 2003.16 Single User Db |

| Targets | | | | | | | | | | |
|--------------------|-----------|----------|----------|--------|----------|-------------|-------------|------------------|------------------|--|
| Target Name | | | | | | | | | | |
| - hit/miss target | Dip Angle | Dip Dir. | TVD | +N-S | +E-W | Northing | Easting | Latitude | Longitude | |
| Shape | (°) | (°) | (ft) | (ft) | (ft) | (ft) | (ft) | | | |
| Pb-HI | 0.00 | 0.00 | 6,680.00 | -98.54 | 4,449.08 | 702,772.089 | 600,844.111 | 32° 55' 54.417 N | 104° 8' 21.776 W | |
| - plan hits target | | | | | | | | | | |
| - Point | | | | | | | | | | |

| Formations | | | | | | |
|----------------|----------------|--------------|-----------|------|---------------|--|
| Measured Depth | Vertical Depth | Name | Lithology | Dip | Dip Direction | |
| (ft) | (ft) | | | (°) | (°) | |
| 1,850.00 | 1,850.00 | San Andres D | | 0.00 | | |
| 6,874.16 | 6,810.00 | Wolfcamp Pay | | 0.00 | | |
| 3,375.00 | 3,375.00 | Glorieta | | 0.00 | | |
| 385.00 | 385.00 | Yates | | 0.00 | | |
| 1,120.00 | 1,120.00 | Queen | | 0.00 | | |
| 6,727.18 | 6,585.00 | Wolfcamp | | 0.00 | | |
| 5,370.00 | 5,370.00 | Abo Shale | | 0.00 | | |

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

EXHIBIT "F"

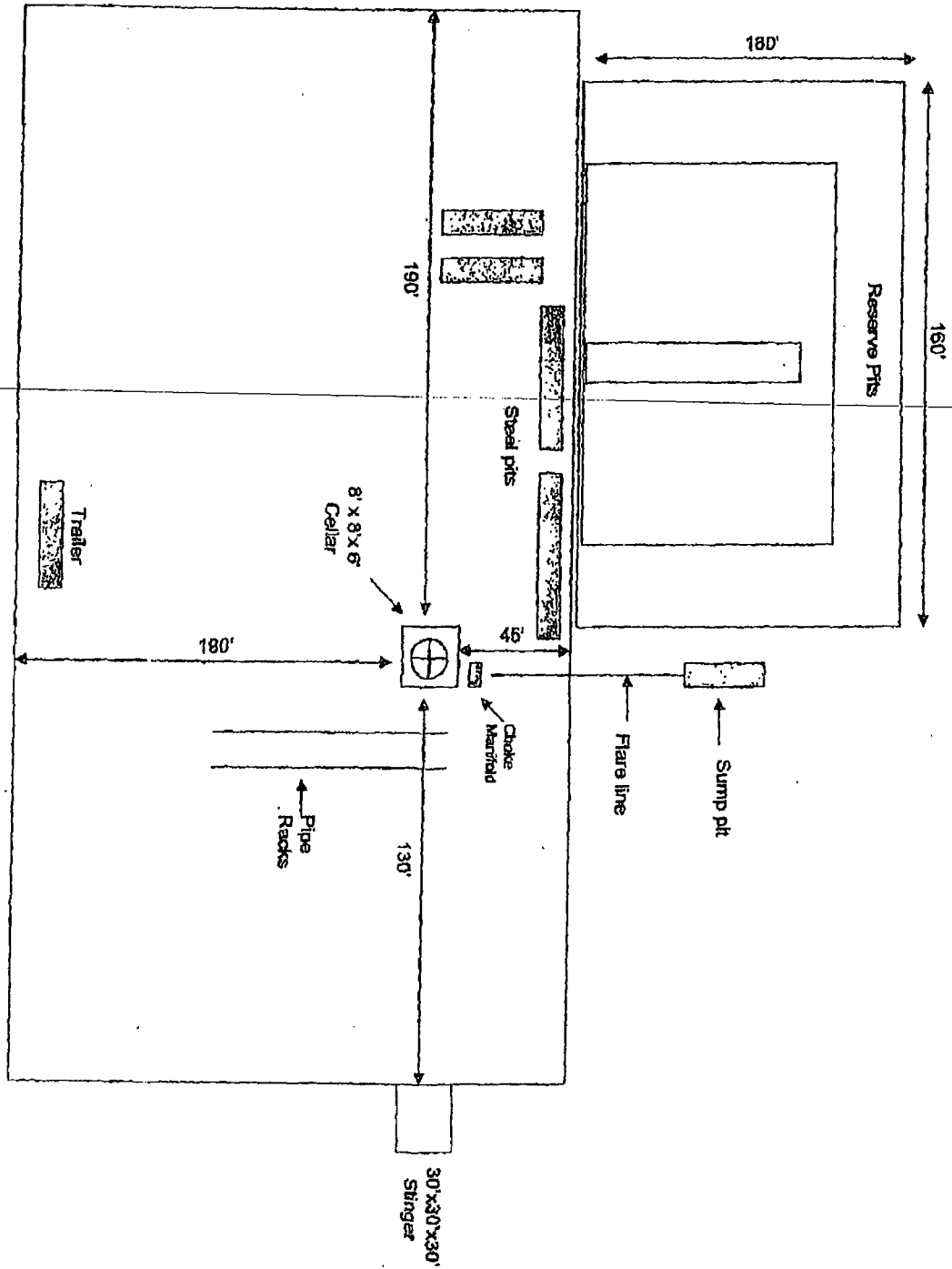


EXHIBIT "G"

BOPE SCHEMATIC

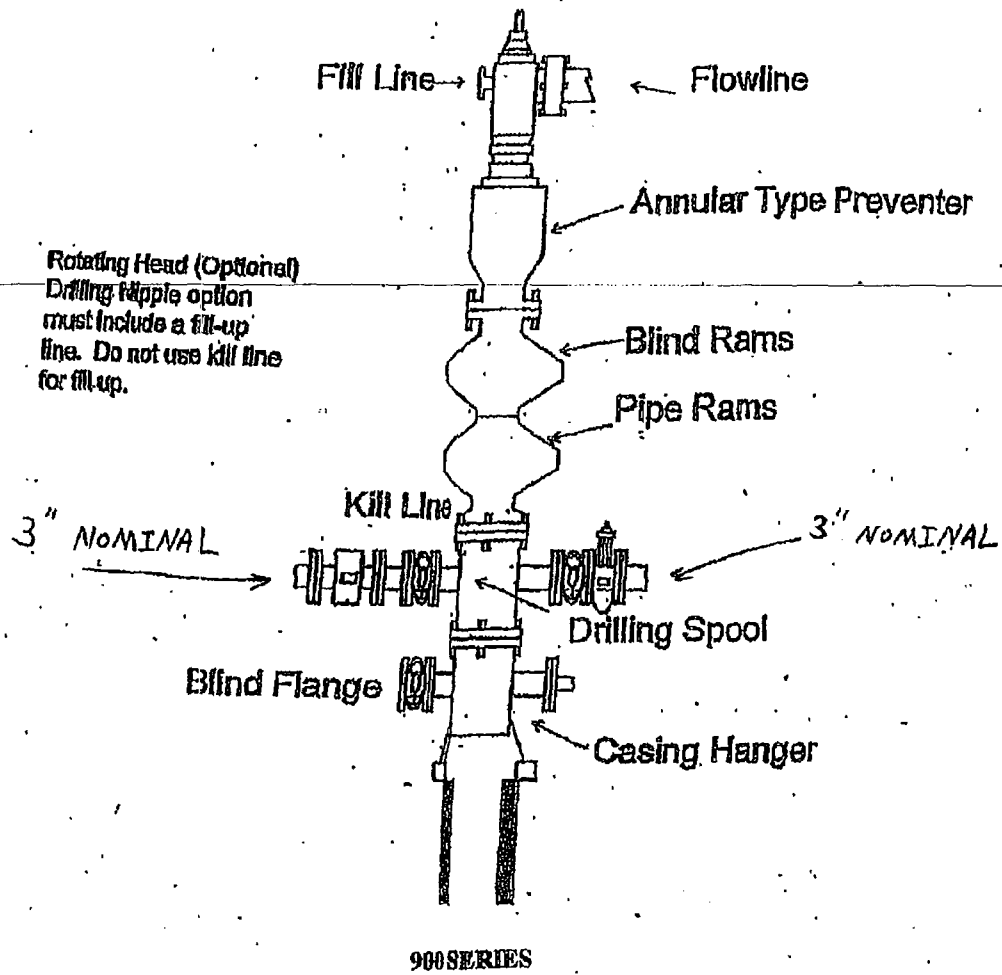
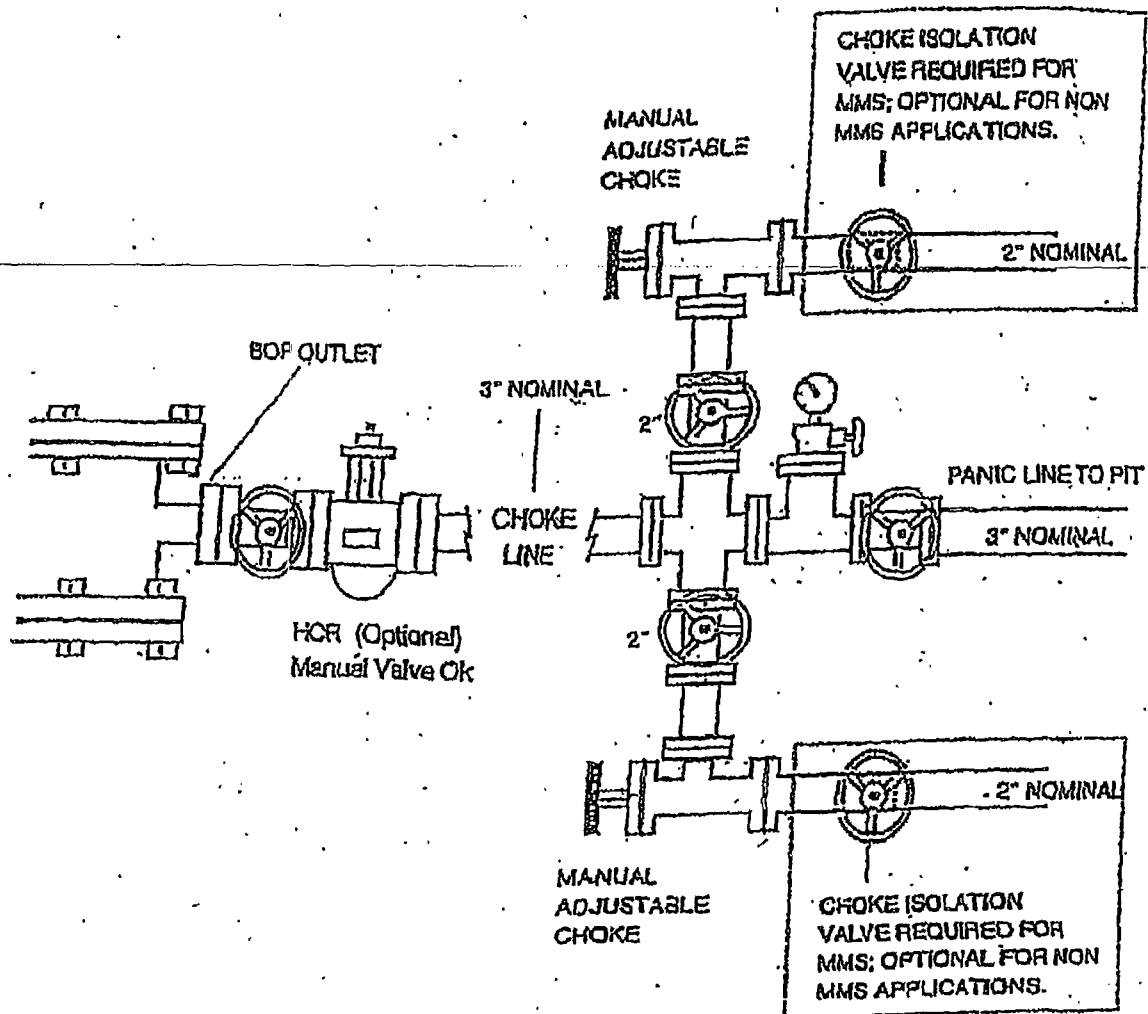


EXHIBIT "H"

CHOKE MANIFOLD

3M SERVICE



COG OPERATING, LLC

HYDROGEN SULFIDE (H₂S) CONTINGENCY PLAN FOR DRILLING / COMPLETING / WORKOVER / FACILITY WITH THE EXPECTATION OF H₂S IN EXCESS OF 100 PPM

**C.O.G. Operating, LLC
NEW DRILL WELL
Blackhawk "11" Federal #1
SL: 430' FSL & 430' FWL, Unit M
BHL: 330' FSL & 330' FWL, Unit P
Sec 11, T16S, R28E
Eddy County, New Mexico**

This well / facility is not expected to have H₂S, but the following is submitted as requested.

TABLE OF CONTENTS

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|-------|--|-------------|
| I. | General Emergency Plan | Page 3 |
| II. | Emergency Procedure for Uncontrolled Release of H ₂ S | Page 3 |
| III. | Emergency Numbers for Notification | Page 4 |
| IV. | Protection of the General (ROE) Radius of Exposure | Page 5 |
| V. | Public Evacuation Plan | Page 6 |
| VI. | Procedure for Igniting an Uncontrollable Condition | Page 7 |
| VII. | Required Emergency Equipment | Page 8 |
| VIII. | Using Self-Contained Breathing Air Equipment (SCBA) | Page 9 |
| IX. | Rescue & First Aid for Victims of H ₂ S Poisoning | Page 10 |
| X. | H ₂ S Toxic Effects | Pages 11-12 |
| XI. | H ₂ S Physical Effects | Pages 13-14 |
| XII. | Location Map | Page 15 |
| XIII. | Vicinity Map | Page 16 |

GENERAL H2S EMERGENCY ACTIONS

In the event of any evidence of H2S emergency, the following plan will be initiated:

1. All personnel will immediately evacuate to an up-wind and if possible up-hill "safe area".
2. If for any reason a person must enter the hazardous area, they must wear a SCBA (self-contained breathing apparatus).
3. Always use the "buddy system".
4. Isolate the well / problem if possible.
5. Account for all personnel.
6. Display the proper colors warning all unsuspecting personnel of the danger at hand.
7. Contact the company representative as soon as possible if not at the location (use the enclosed call list as instructed).

At this point the company representative will evaluate the situation and coordinate the necessary duties to bring the situation under control, and if necessary, the notification of emergency response agencies and residents.

EMERGENCY PROCEDURES FOR AN UNCONTROLLABLE RELEASE OF H2S

1. All personnel will don the self-contained breathing apparatus.
2. Remove all personnel to the "safe area: (always use the "buddy system")".
3. Contact company representative if not on location.
4. Set in motion the steps to protect and / or remove the general public to any upwind "safe are". Maintain strict security and safety procedures while dealing with the source.
5. No entry to any unauthorized personnel.
6. Notify the appropriate agencies: City Police - City streets
 State Police - State Roads
 County Sheriff - County Roads
7. Call the NMOCD.

If at this time the supervising person determines the release of H₂S cannot be contained to the site location and the general public is in harms way, he will immediately notify public safety personnel.

EMERGENCY CALL LIST

| | <u>Office</u> | <u>Cell</u> | <u>Home</u> |
|--------------|---------------|--------------|--------------|
| John Coffman | 432-683-7443 | 432-631-9762 | 432-699-5552 |
| Erick Nelson | 432-683-7443 | 432-238-7591 | |
| Matt Corser | 432-683-7443 | 432-413-0071 | |

EMERGENCY RESPONSE NUMBERS

Eddy County, New Mexico

| | |
|--|---------------------|
| State Police | 505-748-9718 |
| Eddy County Sheriff | 505-746-2701 |
| Emergency Medical Services (Ambulance) | 911 or 505-746-2701 |
| Eddy County Emergency Management (Harry Burgess) | 505-887-9511 |
| State Emergency Response Center (SERC) | 505-476-9620 |
| Carlsbad Police Department | 505-885-2111 |
| Carlsbad Fire Department | 505-885-3125 |
| New Mexico Oil Conservation Division | 505-748-1283 |
| Callaway Safety Equipment, Inc. | 505-392-2973 |

PROTECTION OF THE GENERAL (ROE) RADIUS OF EXPOSURE

In the event greater than 100 ppg H2S is present, the ROE calculations will be done to determine if the following is warranted:

- * 100 ppm at any public area (any place not associated with this site)
- * 500 ppm at any public road (any road which the general public may travel).
- * 100 ppm radius of 3000' will be assumed if there is insufficient data to do the calculations, and there is a reasonable expectation that H2S could be present in concentrations greater than 100 ppm in the gas mixture.

Calculation for the 100 ppm ROE:

(H2S concentrations in decimal form)

$$X = [(1.589)(\text{concentration})(Q)] (0.6258)$$

$$10,000 \text{ ppm} = .01$$

$$1,000 \text{ ppm} = .001$$

Calculation for the 500 ppm ROE:

$$100 \text{ ppm} = .0001$$

$$10 \text{ ppm} = .00001$$

$$X = [(0.4546)(\text{concentration})(Q)] (.06258)$$

EXAMPLE: If a well / facility has been determined to have 150 ppm H2S in the gas mixture and the well / facility is producing at a gas rate of 200 MCFD then:

$$\text{ROE for 100 ppm} \quad X = [(1.589)(.00010)(200,000)] (0.6258)$$

$$X = 8.8'$$

$$\text{ROE for 500 ppm} \quad X = [(0.4546)(.00050)(200,000)] (0.6258)$$

$$X = 10.9'$$

These calculations will be forwarded to the appropriate NMOCD district office when applicable.

PUBLIC EVACUATION PLAN

When the supervisor has determined that the general public will be involved, the following plan will be implemented.

1. Notification of the emergency response agencies of the hazardous condition and implement evacuation procedures.
2. A trained person in H₂S safety shall monitor with detection equipment the H₂S concentration, wind and area of exposure. This person will determine the outer perimeter of the hazardous area. The extent of the evacuation area will be determined from the data being collected. Monitoring shall continue until the situation has been resolved. All monitoring equipment shall be UL approved for use in Class I Groups A, B, C & D, Division I hazardous locations. All monitors will have a minimum capability of measuring H₂S, oxygen, and flammable values.
3. Law enforcement shall be notified to set up necessary barriers and maintain such for the duration of the situation as well as aid in the evacuation procedure.
4. The company representative shall stay in communication with all agencies throughout the duration of the situation and inform such agencies when the situation has been contained and the effected area is safe to enter.

PROCEDURE FOR IGNITING AN UNCONTROLLABLE CONDITION

The decision to ignite a well should be a last resort and one, if not both, of the following pertain:

1. Human life and / or property are endangered.
2. There is no hope of bringing the situation under control with the prevailing conditions at the site.

Instructions for Igniting the Well:

1. Two people are required. They must be equipped with positive pressure, self-contained breathing apparatus and "D"-ring style, full body, OSHA approved safety harness. Non-flammable rope will be attached.
2. One of the people will be a qualified safety person who will test the atmosphere for H₂S, oxygen and LFL. The other person will be the company representative.
3. Ignite upwind from a distance no closer than necessary. Make sure that where you ignite from has the maximum escape avenue available. A 25mm flare gun with a range of approximately +/- 500 feet shall be used to ignite the gas.
4. Before igniting, check for the presence of combustible gases.
5. After igniting, continue emergency actions and procedures as before.

REQUIRED EMERGENCY EQUIPMENT

1. Breathing Apparatus

- * Rescue Packs (SCBA) – 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- * Work / Escape Packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- * Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.

2. Signage and Flagging

- * One Color Code Condition Sign will be placed at the entrance to the site reflecting the possible conditions at the site.
- * A Colored Condition flag will be on display reflecting the condition at the site at that time.

3. Briefing Area

- * Two perpendicular areas will be designated by signs and readily accessible.

4. Windsocks

- * Two windsocks will be placed in strategic locations, visible from all angles.

5. H2S Detectors and Alarms

* The stationary detector with three (3) sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible alarm @ 15 ppm. Calibrate a minimum of every 30 days or as needed. The three sensors will be placed in the following places: (Gas sample tubes will be stored in the safety trailer):

- * Rig Floor
- * Bell Nipple
- * End of flow line or where well bore fluid is being discharged

6. Auxiliary Rescue Equipment

- * Stretcher
- * Two OSHA full body harnesses
- * 100' of 5/8" OSHA approved rope
- * One 20 lb. Class ABC fire extinguisher
- * Communication via cell phones on location and vehicles on location

USING SELF-CONTAINED BREATHING AIR EQUIPMENT (SCBA)

1. SCBA should be worn when any of the following are performed:
 - * Working near the top or on top of a tank
 - * Disconnecting any line where H₂S can reasonably be expected.
 - * Sampling air in the area to determine if toxic concentrations of H₂S exist.
 - * Working in areas where over 10 ppm of H₂S has been detected.
 - * At any time there is a doubt of the level of H₂S in the area.
2. All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous location.
3. Facial hair and standard eyeglasses are not allowed with SCBA.
4. Contact lenses are never allowed with SCBA.
5. When breaking out any line where H₂S can reasonably be expected.
6. After each use, the SCBA unit shall be cleaned, disinfected, serviced and inspected.
7. All SCBA shall be inspected monthly.

RESCUE & FIRST AID FOR VICTIMS OF H₂S POISONING

- * Do not panic.
- * Remain calm and think.
- * Get on the breathing apparatus.
- * Remove the victim to the safe breathing area as quickly as possible, upwind and uphill from source or crosswind to achieve upwind.
- * Notify emergency response personnel.
- * Provide artificial respiration and / or CPR as necessary.
- * Remove all contaminated clothing to avoid further exposure.
- * A minimum of two (2) personnel on location shall be trained in CPR and First Aid.

Toxic Effects of H2S Poisoning

Hydrogen Sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 PPM, which is .001% by volume. Hydrogen Sulfide is heavier than air (specific gravity-1.192) and is colorless and transparent. Hydrogen Sulfide is almost as toxic as Hydrogen Cyanide and is 5-6 times more toxic than Carbon Monoxide. Occupational exposure limits for Hydrogen sulfide and other gasses are compared below in Table I. toxicity table for H2S and physical effects are shown in Table II.

Table 1
Permissible Exposure Limits of Various Gasses

| Common Name | Symbol | Sp. Gravity | TLV | STEL | IDLH |
|------------------|--------|-------------|----------|------------|---------|
| Hydrogen Cyanide | HCN | .94 | 4.7 ppm | C | |
| Hydrogen Sulfide | H2S | 1.192 | 10 ppm | 15 ppm | 100 ppm |
| Sulfide Dioxide | SO2 | 2.21 | 2 ppm | 5 ppm | |
| Chlorine | CL | 2.45 | .5 ppm | 1 ppm | |
| Carbon Monoxide | CO | .97 | 25 ppm | 200 ppm | |
| Carbon Dioxide | CO2 | 1.52 | 5000 ppm | 30,000 ppm | |
| Methane | CH4 | .55 | 4.7% LEL | 14% UEL | |

Definitions

- A. TLV – Threshold Limit Value is the concentration employees may be exposed to based on a TWA (time weighted average) for eight (8) hours in one day for 40 hours in one (1) week. This is set by ACGIH (American Conference of Governmental Hygienists and regulated by OSHA.
- B. STEL – Short Term Exposure Limit is the 15 minute average concentration an employee may be exposed to providing that the highest exposure never exceeds the OEL (Occupational Exposure Limit). The OEL for H2S is 19 PPM.
- C. IDLH – Immediately Dangerous to Life and Health is the concentration that has been determined by the ACGIH to cause serious health problems or death if exposed to this level. The IDLH for H2S is 100 PPM.
- D. TWA – Time Weighted Average is the average concentration of any chemical or gas for an eight (8) hour period. This is the concentration that any employee may be exposed to based on an TWA.

TABLE II
Toxicity Table of H₂S

| Percent % | PPM | Physical Effects |
|-----------|------|---|
| .0001 | 1 | Can smell less than 1 ppm. |
| .001 | 10 | TLV for 8 hours of exposure |
| .0015 | 15 | STEL for 15 minutes of exposure |
| .01 | 100 | Immediately Dangerous to Life & Health. Kills sense of smell in 3 to 5 minutes. |
| .02 | 200 | Kills sense of smell quickly, may burn eyes and throat. |
| .05 | 500 | Dizziness, cessation of breathing begins in a few minutes. |
| .07 | 700 | Unconscious quickly, death will result if not rescued promptly. |
| .10 | 1000 | Death will result unless rescued promptly. Artificial resuscitation may be necessary. |

PHYSICAL PROPERTIES OF H₂S

The properties of all gasses are usually described in the context of seven major categories:

COLOR
ODOR
VAPOR DENSITY
EXPLOSIVE LIMITS
FLAMMABILITY
SOLUBILITY (IN WATER)
BOILING POINT

Hydrogen Sulfide is no exception. Information from these categories should be considered in order to provide a fairly complete picture of the properties of the gas.

COLOR – TRANSPARENT

Hydrogen Sulfide is colorless so it is invisible. This fact simply means that you can't rely on your eyes to detect its presence, a fact that makes the gas extremely dangerous to be around.

ODOR – ROTTEN EGGS

Hydrogen Sulfide has a distinctive offensive smell, similar to "rotten eggs". For this reason it earned its common name "sour gas". However, H₂S, even in low concentrations, is so toxic that it attacks and quickly impairs a victim's sense of smell, so it could be fatal to rely on your nose as a detection device.

VAPOR DENSITY – SPECIFIC GRAVITY OF 1.192

Hydrogen Sulfide is heavier than air so it tends to settle in low-lying areas like pits, cellars or tanks. If you find yourself in a location where H₂S is known to exist, protect yourself. Whenever possible, work in an area upwind and keep to higher ground.

EXPLOSIVE LIMITS – 4.3% TO 46%

Mixed with the right proportion of air or oxygen, H₂S will ignite and burn or explode, producing another alarming element of danger besides poisoning.

FLAMMABILITY

Hydrogen Sulfide will burn readily with a distinctive clear blue flame, producing Sulfur Dioxide (SO₂), another hazardous gas that irritates the eyes and lungs.

SOLUBILITY – 4 TO 1 RATIO WITH WATER

Hydrogen Sulfide can be dissolved in liquids, which means that it can be present in any container or vessel used to carry or hold well fluids including oil, water, emulsion and sludge. The solubility of H₂S is dependent on temperature and pressure, but if conditions are right, simply agitating a fluid containing H₂S may release the gas into the air.

BOILING POINT – (-76 degrees Fahrenheit)

Liquefied Hydrogen Sulfide boils at a very low temperature, so it is usually found as a gas.

**SURFACE USE AND OPERATIONS PLAN
FOR DRILLING, COMPLETION, AND PRODUCING**

**C.O.G. Operating, LLC
Blackhawk "11" Federal #1
SL: 430' FSL & 430' FWL, Unit M
BHL: 330' FSL & 330' FWL, Unit P
Sec 11, T16S, R28E
Eddy County, New Mexico**

LOCATED:

Approximately 10 miles Northwest of Loco Hills

OIL & GAS LEASE

SL: State
BHL: NMNM # 103873

RECORD TITLE LESSEE

SL: CHASE OIL CORP- P.O. Box 1767, Artesia, NM 88211-1767
(Operating rights: COG Oil & Gas, LP)

BHL: COG Oil & Gas, LP – 550 West Texas Ave., Suite 1300, Midland, TX 79701

BOND COVERAGE

\$25,000 statewide bond of C.O.G. Operating, L.L.C. NMB 000215

SURFACE OWNER

State of New Mexico

MINERAL OWNER

Bureau of Land Management

GRAZING TENANT

SL; Bogle LTD Co., LLC, P.O. Box 460, Dexter, NM 88230, (505) 734-5442
BHL: Bogle LTD Co., LLC, P.O. Box 460, Dexter, NM 88230, (505) 734-5442

POOL

Wolfcamp – Crow Flats

PROPOSED TOTAL DEPTH

This well will be drilled to a Horizontal Total Vertical Depth of approximately 6,680'
and a Horizontal Total Measured Depth of approximately 11,130'.

EXHIBITS

- A. Well Location & Acreage Dedication Map
- B. Area Road Map
- C. Vicinity Oil & Gas Map
- D-1- D-2. Topographic & Location Verification Map
- E-1- E-4. Proposed Lease Road and Pad Layout Map
- F. Drilling Rig Layout
- G. BOPE Schematic
- H. Choke Manifold Schematic

EXISTING ROADS

- A. Exhibit A is a portion of a section map showing the location of the proposed well as staked.
- B. Exhibit B is a map showing existing roads in the vicinity of the proposed well site.
- C. Directions to well location:
From the junction of US Hwy 82 and County Road Southern Union, go north on Southern Union for 2.5 miles winding northeast for 1.2 miles to lease road, on lease road go north 1.3 miles to lease road, on lease road go east 1.5 miles to lease road, on lease road go north 3.0 miles to lease road, thence east 2.0 miles to proposed lease road.

ACCESS ROADS

- A. Length and Width: 5,40.7' long and 30' wide.
Approximately 4,275.2' of Road Right-of-Way has been obtained from BLM (NM 119633) and approximately 1,065.5' of Road Right-of-Way in the SW/4SW/4 and the NW/4SW/4 of Section 11 has been obtained from the State (RW 30883).
- B. Surface Material: Existing
- C. Maximum Grad: Less than five percent
- D. Turnouts: None necessary
- E. Drainage Design: Existing
- F. Culverts: None necessary
- G. Gates and Cattle Guards: None needed

LOCATION OF EXISITING WELLS

Existing wells in the immediate area are shown in Exhibit C.

LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

Necessary production facilities for this well will be located on the well pad.

LOCATION AND TYPE OF WATER SUPPLY

It is not contemplated that a water well will be drilled. Water necessary for drilling will be purchased and hauled to the site over existing roads shown on Exhibit E.

METHODS OF HANDLING WASTE DISPOSAL

- A. Drilling fluids will be allowed to evaporate in the drilling pits until the pits are dry.
- B. Water produced during tests will be disposed of in the drilling pits.
- C. Oil produced during tests will be stored in test tanks.
- D. Trash will be contained in a trash trailer and removed from well site.
- E. All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

ANCILLARY FACILITIES

None required.

WELL SITE LAYOUT

Exhibits G and H show the relative location and dimensions of the well pad, mud pits, reserve pit, and trash pit, and the location of major rig components.

PLANS FOR RESTORATION OF THE SURFACE

- A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. The well site will be cleaned of all trash and junk to leave the site in an as aesthetically pleasing condition as possible.
- B. After abandonment, all equipment, trash, and junk will be removed and the site will be clean.

OPERATOR'S REPRESENTATIVE

John Coffman
C.O.G. Operating, LLC
550 W. Texas Ave, Suite 1300
Midland, TX 79701
(432) 683-7443

CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by the C.O.G. Operating, LLC Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

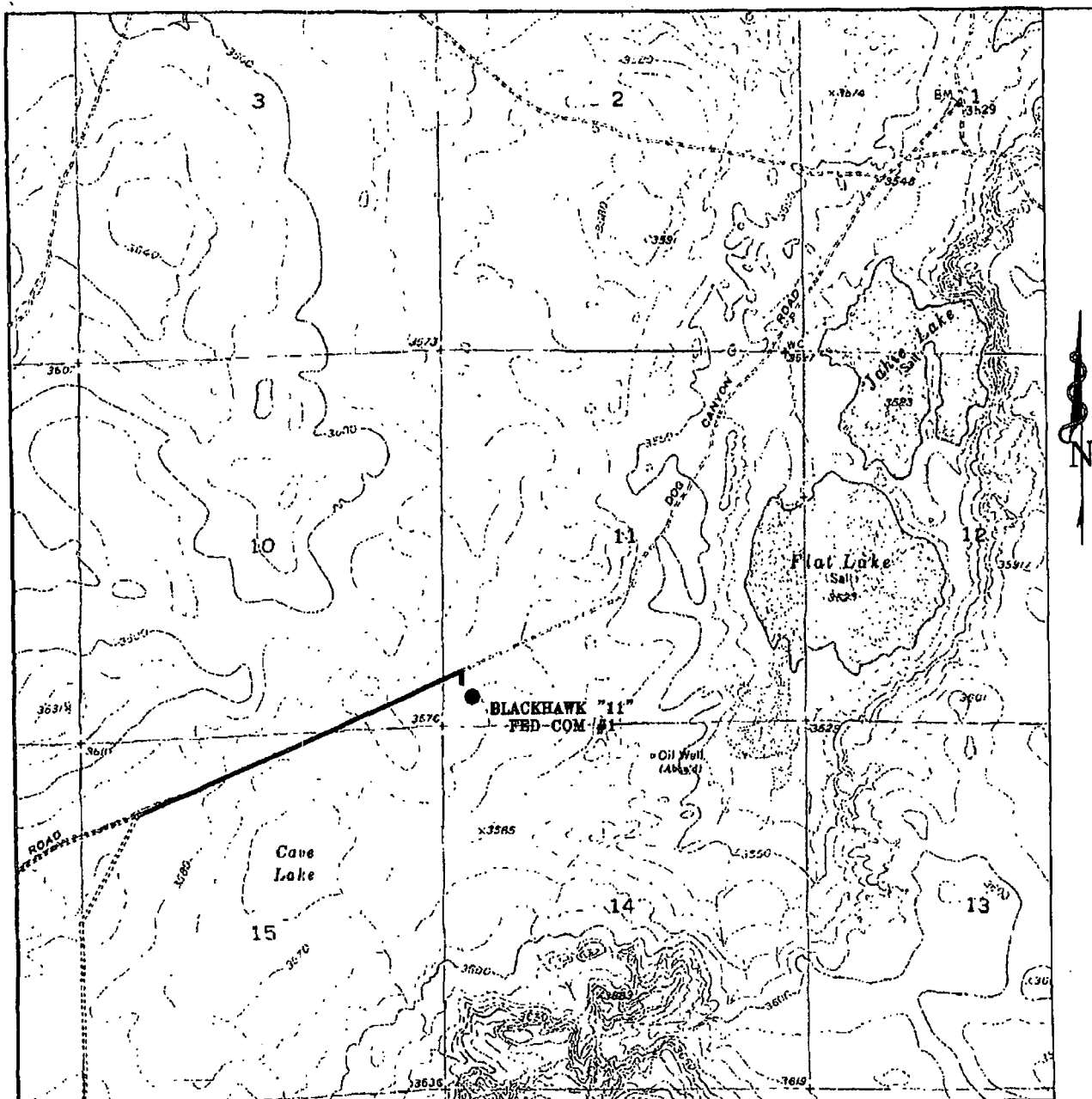
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5-8-08

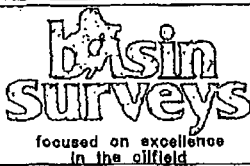
John Coffman

C.O.G. Operating, LLC

EXHIBIT "B"



BLACKHAWK "11" FEDERAL COM #1
 Located at 430' FSL and 430 FWL
 Section 11, Township 16 South, Range 28 East,
 N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

W.O. Number: JMS 18743T

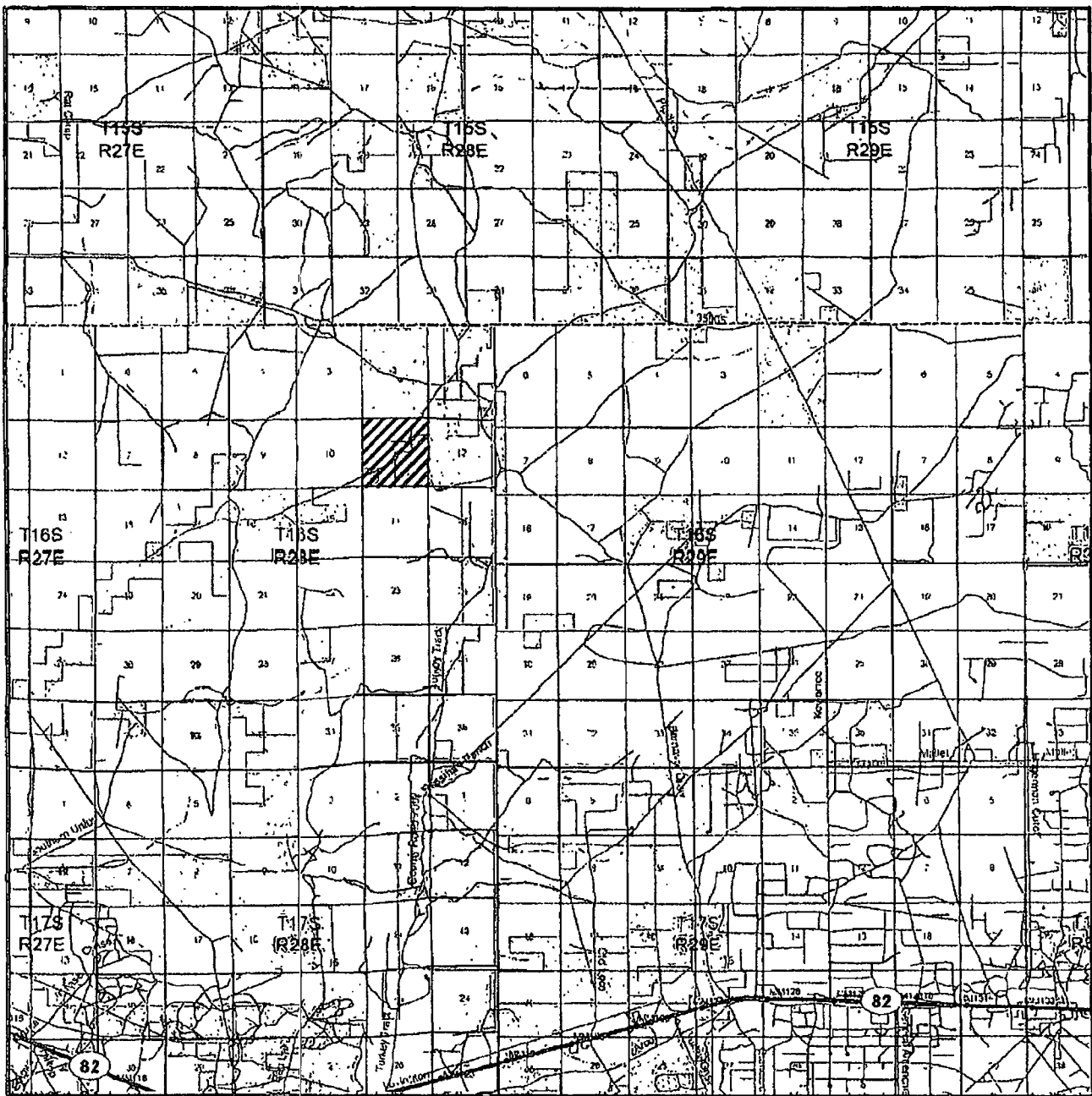
Survey Date: 12-16-2007

Scale: 1" = 2000'

Date: 12-17-2007

**C.O.G.
 OPERATING
 L.L.C.**

EXHIBIT "C"



BLACKHAWK "11" FEDERAL COM #1
 Located at 430' FSL and 430' FWL
 Section 11, Township 16 South, Range 28 East,
 N.M.P.M., Eddy County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

W.O. Number: JMS 18743TR

Survey Date: 12-16-2007

Scale: 1" = 2 MILES

Date: 12-17-2007

C.O.G.
 OPERATING
 L.L.C.

Caribou "19" Fed #2
Caribou "19" Fed #1

Reindeer "21" Fed #3
Reindeer "21" Fed #4

Blackhawk "11" Fed #1

EXHIBIT "D-1"

EXHIBIT "D-2"

Blackhawk "11" Fed #1

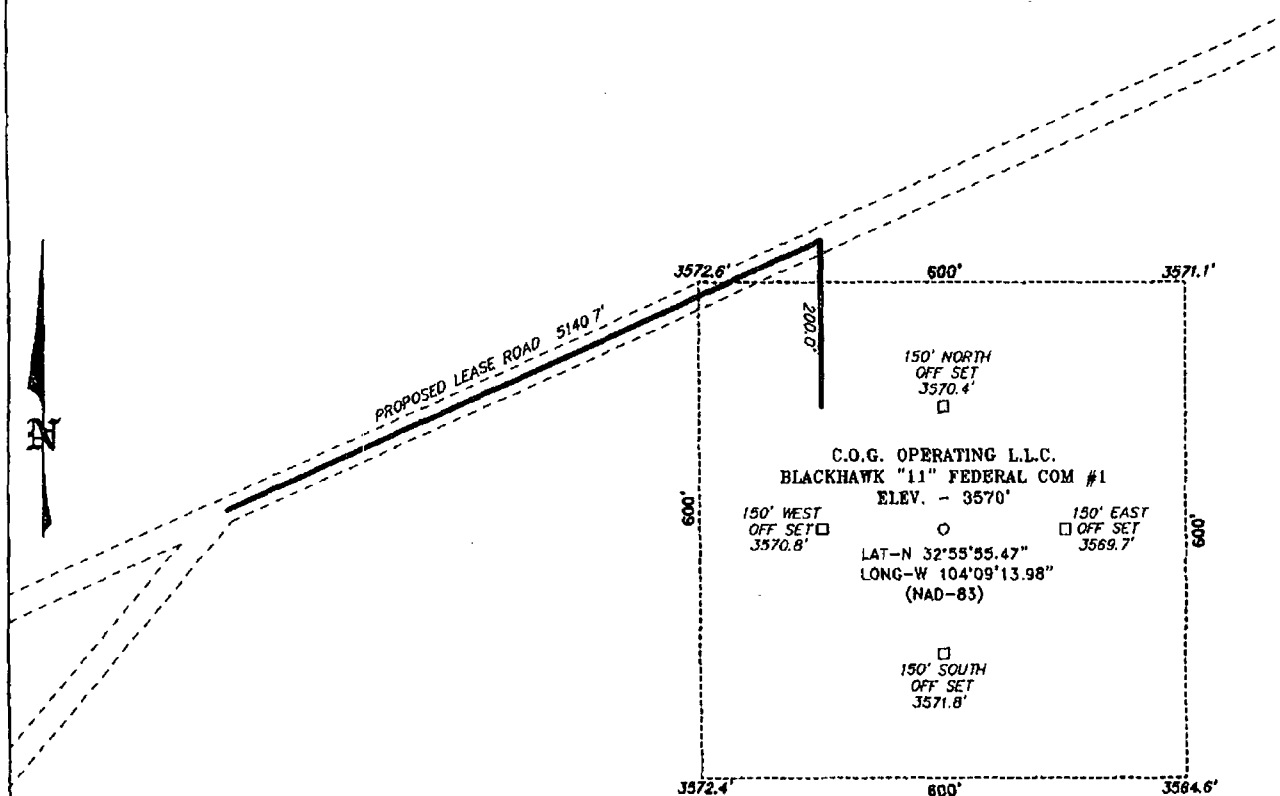
Reindeer "21" Fed #3

Reindeer "21" Fed #4

Caribou "19" Fed #2

Caribou "19" Fed #1

SECTION 11, TOWNSHIP 16 SOUTH, RANGE 28 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

FROM THE JUNCTION OF US HWY 82 AND CO. RD.
SOUTHERN UNION, GO NORTH ON SOUTHERN UNION
FOR 2.5 MILES WINDING NORTHEAST FOR 1.2 MILES TO
LEASE ROAD, ON LEASE ROAD GO NORTH 1.3 MILES
TO LEASE ROAD, ON LEASE ROAD GO EAST 1.5 MILES
TO LEASE ROAD, ON LEASE ROAD GO NORTH 3.0
MILES TO LEASE ROAD, THENCE EAST 2.0 MILES TO
PROPOSED LEASE ROAD.

BASIN SURVEYS P.O. BOX 1786—HOBBS, NEW MEXICO

| | |
|--------------------|-----------------------|
| W.O. Number: 18743 | Drawn By: J. M. SMALL |
|--------------------|-----------------------|

Date: 12-17-2007 Disk: JMS 18743W

200 0 200 400 FEET

SCALE: 1" = 200'

C.O.G. OPERATING L.L.C.

REF: BLACKHAWK "11" FEDERAL COM #1 / Well Pad Topo

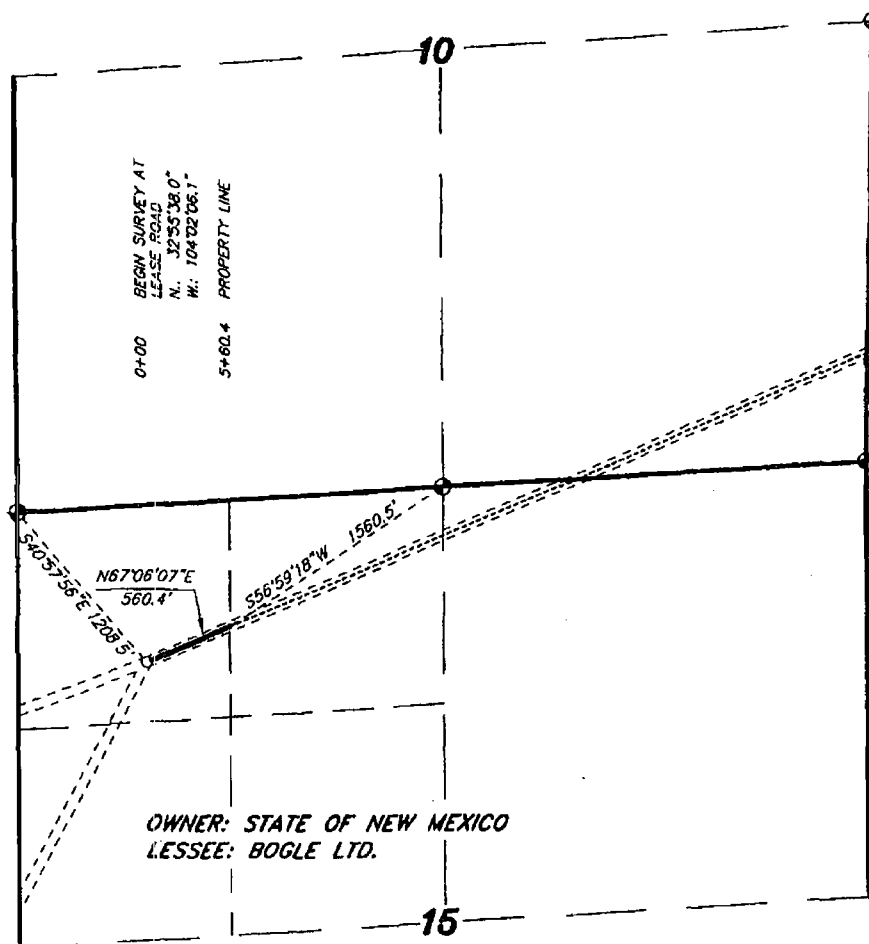
THE BLACKHAWK "11" FEDERAL COM #1 LOCATED 430' FROM

THE SOUTH LINE AND 430' FROM THE WEST LINE OF
SECTION 11, TOWNSHIP 16 SOUTH, RANGE 28 EAST.

N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 12-16-2007 Sheet 1 of 1 Sheets

SECTION 15, TOWNSHIP 16 SOUTH, RANGE 28 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



OWNER: STATE OF NEW MEXICO
LESSEE: BOGLE LTD.

LEGAL DESCRIPTION

A STRIP OF LAND 20.0 FEET WIDE, LOCATED IN SECTION 15, TOWNSHIP 16 SOUTH, RANGE 28 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 10.0 FEET LEFT AND RIGHT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY BEGINNING AT A POINT WHICH LIES S.40°37'56"E., 1208.5 FEET FROM THE NORTHWEST CORNER OF SAID SECTION 15; THENCE N.67°06'07"E., 560.4 FEET TO A POINT ON THE EAST PROPERTY LINE WHICH LIES S.56°59'18"W., 1560.5 FEET FROM THE NORTH QUARTER CORNER OF SAID SECTION 15. SAID STRIP OF LAND BEING 560.4 FEET OR 33.96 RODS IN LENGTH AND CONTAINING 0.28 ACRES, MORE OR LESS, AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4 = 33.96 RODS = 0.26 ACRES

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES U.S. No. 7977
TEXAS P.L.S. No. 5074

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

| | |
|--------------------|-----------------------|
| W.O. Number. 18743 | Drawn By: J. M. SMALL |
| Date: 12-17-2007 | Disk: JMS 18743R |



C.O.G. OPERATING L.L.C.

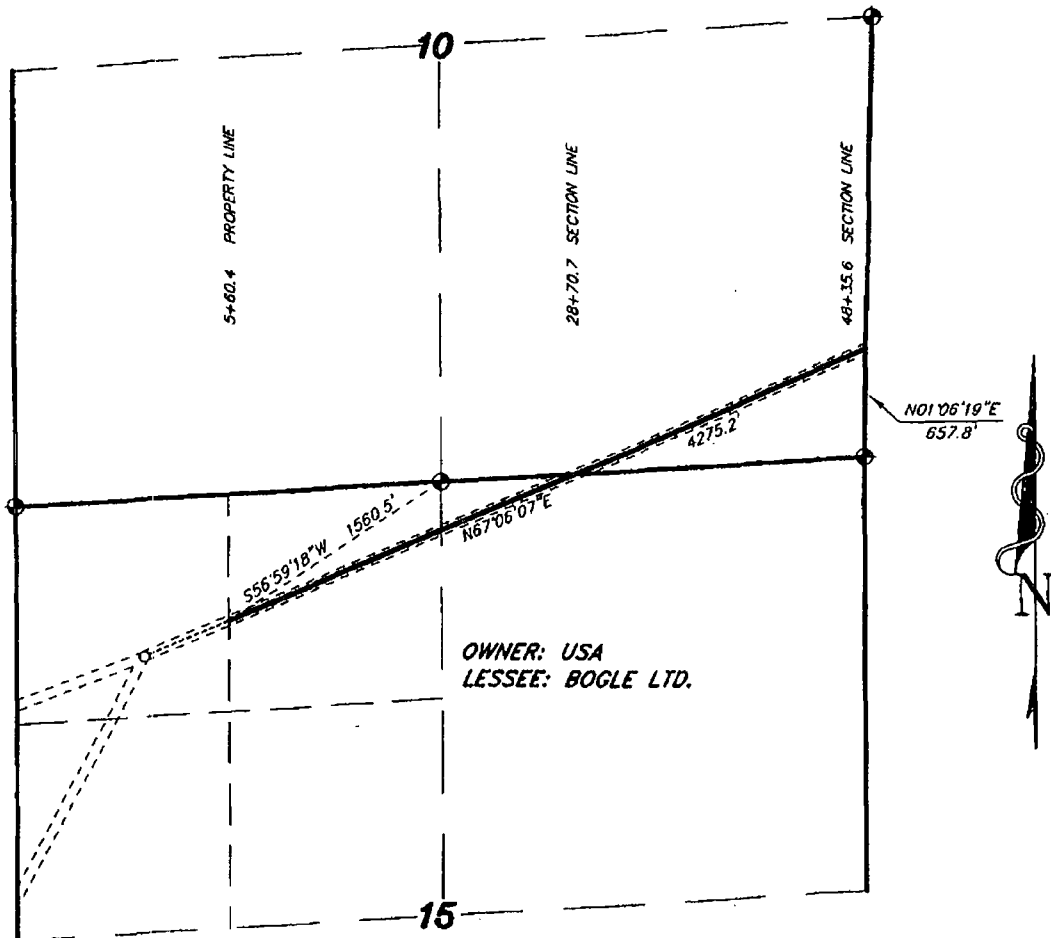
REF: PROP. LEASE ROAD TO THE BLACKHAWK "11" FEDERAL COM #1

A ROAD CROSSING STATE LAND IN
SECTION 15, TOWNSHIP 16 SOUTH, RANGE 28 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 12-16-2007 Sheet 1 of 3 Sheets

EXHIBIT "E-3"

SECTIONS 10&15, TOWNSHIP 16 SOUTH, RANGE 28 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



LEGAL DESCRIPTION

A STRIP OF LAND 20.0 FEET WIDE, LOCATED IN SECTIONS 10&15, TOWNSHIP 16 SOUTH, RANGE 28 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 10.0 FEET LEFT AND RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

SECTION 15 = 2310.3 FEET = 140.01 RODS = 0.44 MILES = 1.06 ACRES

SECTION 10 = 1964.9 FEET = 119.09 RODS = 0.37 MILES = 0.90 ACRES

TOTAL = 4275.2 FEET = 259.10 RODS = 0.81 MILES = 1.96 ACRES

I HEREBY CERTIFY THAT THE MAP WAS PREPARED
FROM FIELD NOTES, AERIAL SURVEY AND
MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND
SURVEYS AS SPECIFIED BY THIS STATE

GARY L. JONES

TEXAS P.L.S.

No. 7977

No. 5074

BASIN SURVEYS

P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 18743

Drawn By: J. M. SMALL

Date: 12-17-2007

Disk: JMS 18743R

1000 0 1000 2000 FEET

C.O.G. OPERATING L.L.C.

REF: PROP. LEASE ROAD TO THE BLACKHAWK "11" FEDERAL COM #1

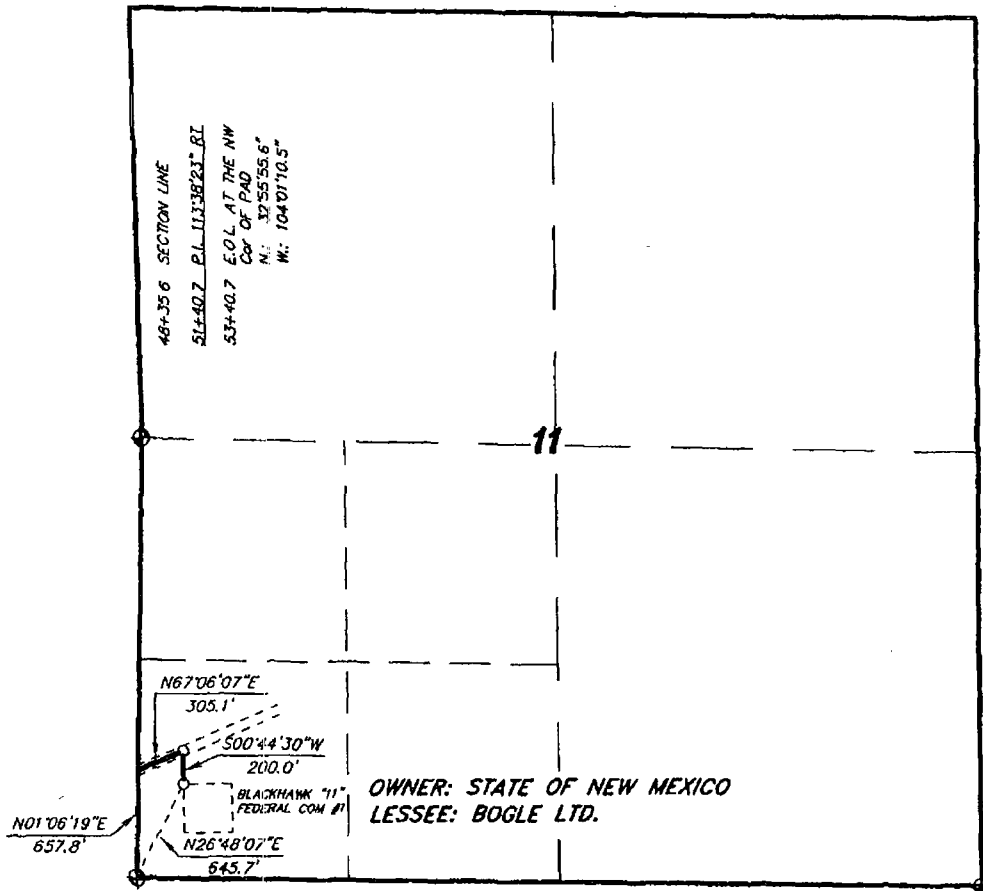
A ROAD CROSSING USA LAND IN
SECTIONS 10&15, TOWNSHIP 16 SOUTH, RANGE 28 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 12-16-2007

Sheet 2 of 3 Sheets

EXHIBIT "E-4"

SECTION 11, TOWNSHIP 16 SOUTH, RANGE 28 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



OWNER: STATE OF NEW MEXICO
LESSEE: BOGLE LTD.

LEGAL DESCRIPTION

A STRIP OF LAND 20.0 FEET WIDE, LOCATED IN SECTION 11, TOWNSHIP 16 SOUTH, RANGE 28 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 10.0 FEET LEFT AND RIGHT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY.
BEGINNING AT A POINT WHICH LIES N.01°06'19"E., 657.8 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION 11; THENCE N 67°06'07"E., 305.1 FEET; THENCE S.00°44'30"W., 200.0 FEET TO THE END OF THIS LINE WHICH LIES N.26°48'07"E., 645.7 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION 11. SAID STRIP OF LAND BEING 505.1 FEET OR 30.61 RODS IN LENGTH AND CONTAINING 0.23 ACRES, MORE OR LESS, AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

$$SW/4 SW/4 = 30.61 \text{ RODS} = 0.23 \text{ ACRES}$$

I HEREBY CERTIFY THAT THIS SURVEY WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L JONES N.M.P.S. No. 7977
TEXAS P.L.S. No. 5074

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 18743 Drawn By: J. M. SMALL

Date: 12-17-2007 Disk: JMS 18743R

1000 0 1000 2000 FEET

C.O.G. OPERATING L.L.C.

REF: PROP. LEASE ROAD TO THE BLACKHAWK "11" FEDERAL COM #1

A ROAD CROSSING STATE LAND IN
SECTION 11, TOWNSHIP 16 SOUTH, RANGE 28 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 12-16-2007 Sheet 3 of 3 Sheets

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
June 16, 2008

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

**Pit, Closed-Loop System, Below-Grade Tank, or
Proposed Alternative Method Permit or Closure Plan Application**

JUL - 7 2008

OCD-ARTESIA

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Type of action: ☒ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
☒ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

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.

| | |
|---|---|
| Operator: COG OPERATING LLC OGRID #: 229137 | |
| Address: 550 WEST TEXAS, SUITE 1300 MIDLAND, TX 79701 | |
| Facility or well name: BLACKHAWK 11 FEDERAL # 1 | |
| API Number: 30-015-316541 OCD Permit Number: _____ | |
| U/L or Qtr/Qtr UL M Section 11 Township 16S Range 28E County: EDDY | |
| Center of Proposed Design: Latitude N/A Longitude N/A NAD: <input type="checkbox"/> 1927 <input type="checkbox"/> 1983 | |
| Surface Owner: <input checked="" type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Tribal Trust or Indian Allotment | |
| <input type="checkbox"/> Pit: Subsection F or G of 19.15.17.11 NMAC Temporary: <input type="checkbox"/> Drilling <input type="checkbox"/> Workover <input type="checkbox"/> Permanent <input type="checkbox"/> Emergency <input type="checkbox"/> Cavitation <input type="checkbox"/> Lined <input type="checkbox"/> Unlined Liner type: Thickness _____ mil <input type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____ <input type="checkbox"/> String-Reinforced Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____ | <input checked="" type="checkbox"/> Closed-loop System: Subsection H of 19.15.17.11 NMAC <input type="checkbox"/> Drying Pad <input type="checkbox"/> Tanks <input checked="" type="checkbox"/> Haul-off Bins <input type="checkbox"/> Other _____ <input type="checkbox"/> Lined <input type="checkbox"/> Unlined Liner type: Thickness _____ mil <input type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____ Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____ Volume: _____ bbl _____ yd ³ Dimensions: Length _____ x Width _____ |
| <input type="checkbox"/> Below-grade tank: Subsection I of 19.15.17.11 NMAC Volume: _____ bbl Type of fluid: _____ Tank Construction material: _____ <input type="checkbox"/> Secondary containment with leak detection <input type="checkbox"/> Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off <input type="checkbox"/> Visible sidewalls and liner <input type="checkbox"/> Visible sidewalls only <input type="checkbox"/> Other _____ Liner type: Thickness _____ mil <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____ | <input type="checkbox"/> Fencing: Subsection D of 19.15.17.11 NMAC <input type="checkbox"/> Chain link, six feet in height, two strands of barbed wire at top <input type="checkbox"/> Four foot height, four strands of barbed wire evenly spaced between one and four feet <input type="checkbox"/> Netting: Subsection E of 19.15.17.11 NMAC <input type="checkbox"/> Screen <input type="checkbox"/> Netting <input type="checkbox"/> Other _____ <input type="checkbox"/> Monthly inspections <input type="checkbox"/> Signs: Subsection C of 19.15.17.11 NMAC <input type="checkbox"/> 12"x24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers <input checked="" type="checkbox"/> Signed in compliance with 19.15.3.103 NMAC |
| <input type="checkbox"/> Alternative Method: Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. | Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. Please check a box if one or more of the following is requested, if not leave blank: <input type="checkbox"/> Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval. <input type="checkbox"/> Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. |

020846

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks)

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

☐ NA

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits)

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

☐ NA

Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

Temporary Pits, Emergency Pits, and Below-grade Tanks 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.

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ 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 - 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: _____ or Permit Number: _____

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.

- ☐ Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☒ 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 - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____

Permanent Pits Permit Application 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.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H₂S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

Proposed Closure: 19.15.17.13 NMAC

Type: ☒ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ Permanent Pit ☐ Below-grade Tank ☒ Closed-loop System ☐ Alternative

Proposed Closure Method: ☐ Waste Excavation and Removal
☐ On-site Closure Method (only for temporary pits and closed-loop systems)
☐ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC

Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

- | | |
|---|---|
| Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Within a 100-year floodplain. - FEMA map | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☐ 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

Waste Removal Closure For Closed-loop Systems That Utilize 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.

Disposal Facility Name: **CRI OR G M INC.** Disposal Facility Permit Number: **CRI (R9166) G M INC (711-019-001)**

On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☐ Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
- ☐ Soil Cover Design - 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): **PHYLLIS A. EDWARDS** Title: **REGULATORY ANALYST**

Signature: *Phyllis A. Edwards* Date: **7-1-08**

e-mail address: **padwards@conchoresources.com** Telephone: **432-685-4340**

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

OCD Representative Signature: *Jim W. Brown* Approval Date: **7/8/07**

Title: *District II Supervisor* OCD Permit Number: **020846**

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

☐ Closure Completion Date: _____

Closure Method:

- ☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method
- ☐ If different from approved plan, please explain.

Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Proof of Closure Notice
- ☐ Proof of Deed Notice (if applicable)
- ☐ Plot Plan
- ☐ Confirmation Sampling Analytical Results
- ☐ Waste Material Sampling Analytical Results
- ☐ Disposal Facility Name and Permit Number
- ☐ Soil Backfilling and Cover Installation
- ☐ Re-vegetation Application Rates and Seeding Technique
- ☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: ☐ 1927 ☐ 1983

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: _____

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.

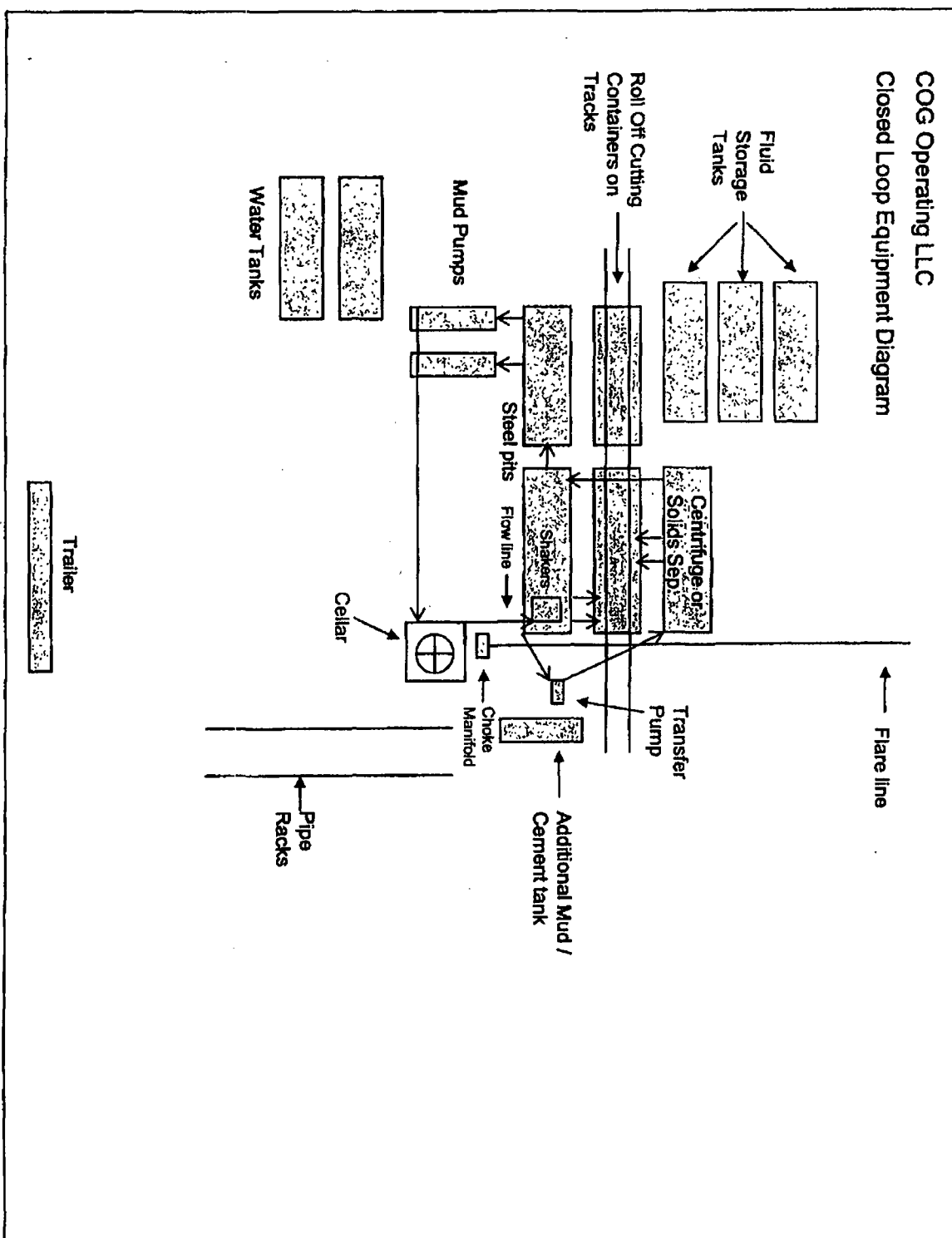
Cuttings will be hauled to either:

CRI (permit number R9166)

or

GMI (permit number 711-019-001)

dependent upon which rig is available to drill this well.



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

AUG 25 2008

Form C-144 CLEZ
July 21, 2008

OCD ARTESIA

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 NMOC 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: <u>COG OPERATING LLC</u> OGRID #: <u>229137</u> | |
| Address: <u>550 WEST TEXAS, SUITE 1300</u> <u>MIDLAND, TX 79701</u> | |
| Facility or well name: <u>BLACKHAWK 11 FEDERAL # 1</u> | |
| API Number: <u>30-015- 36541</u> OCD Permit Number: _____ | |
| U/L or Qtr/Qtr <u>UL M</u> Section <u>11</u> Township <u>16S</u> Range <u>28E</u> County: <u>EDDY</u> | |
| Center of Proposed Design: Latitude <u>N/A</u> Longitude <u>N/A</u> NAD: <input type="checkbox"/> 1927 <input type="checkbox"/> 1983 | |
| Surface Owner: <input checked="" type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Tribal Trust or Indian Allotment | |
| 2. <input checked="" type="checkbox"/> Closed-loop System: Subsection H of 19.15.17.11 NMAC Operation: <input checked="" type="checkbox"/> Drilling a new well <input type="checkbox"/> Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) <input type="checkbox"/> P&A <input type="checkbox"/> Above Ground Steel Tanks or <input checked="" type="checkbox"/> Haul-off Bins | |
| 3. <u>Signs</u> : Subsection C of 19.15.17.11 NMAC <input type="checkbox"/> 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers <input checked="" type="checkbox"/> Signed in compliance with 19.15.3.103 NMAC | |
| 4. <u>Closed-loop Systems Permit Application Attachment Checklist</u> : 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. <input checked="" type="checkbox"/> Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC <input checked="" type="checkbox"/> Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC <input checked="" type="checkbox"/> 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 <input type="checkbox"/> Previously Approved Design (attach copy of design) API Number: _____ <input type="checkbox"/> Previously Approved Operating and Maintenance Plan API Number: _____ | |
| 5. <u>Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only</u> : (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: <u>CRI</u> Disposal Facility Permit Number: <u>R1966</u> Disposal Facility Name: <u>GM INC</u> Disposal Facility Permit Number: <u>711-019-001</u> 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? <input type="checkbox"/> Yes (If yes, please provide the information below) <input checked="" type="checkbox"/> No Required for impacted areas which will not be used for future service and operations: <input type="checkbox"/> Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC <input type="checkbox"/> Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC <input type="checkbox"/> Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC | |
| 6. <u>Operator Application Certification</u> : 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): <u>PHYLLIS A. EDWARDS</u> Title: <u>REGULATORY ANALYST</u> Signature: _____ Date: <u>8-22-08</u> e-mail address: <u>pedwards@conchoresources.com</u> Telephone: <u>432-685-4340</u> | |

020846

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

OCD Representative Signature: [Signature]

Approval Date: 7-8-08

Title: [Signature]

OCD Permit Number: 020846

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 identify 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: _____

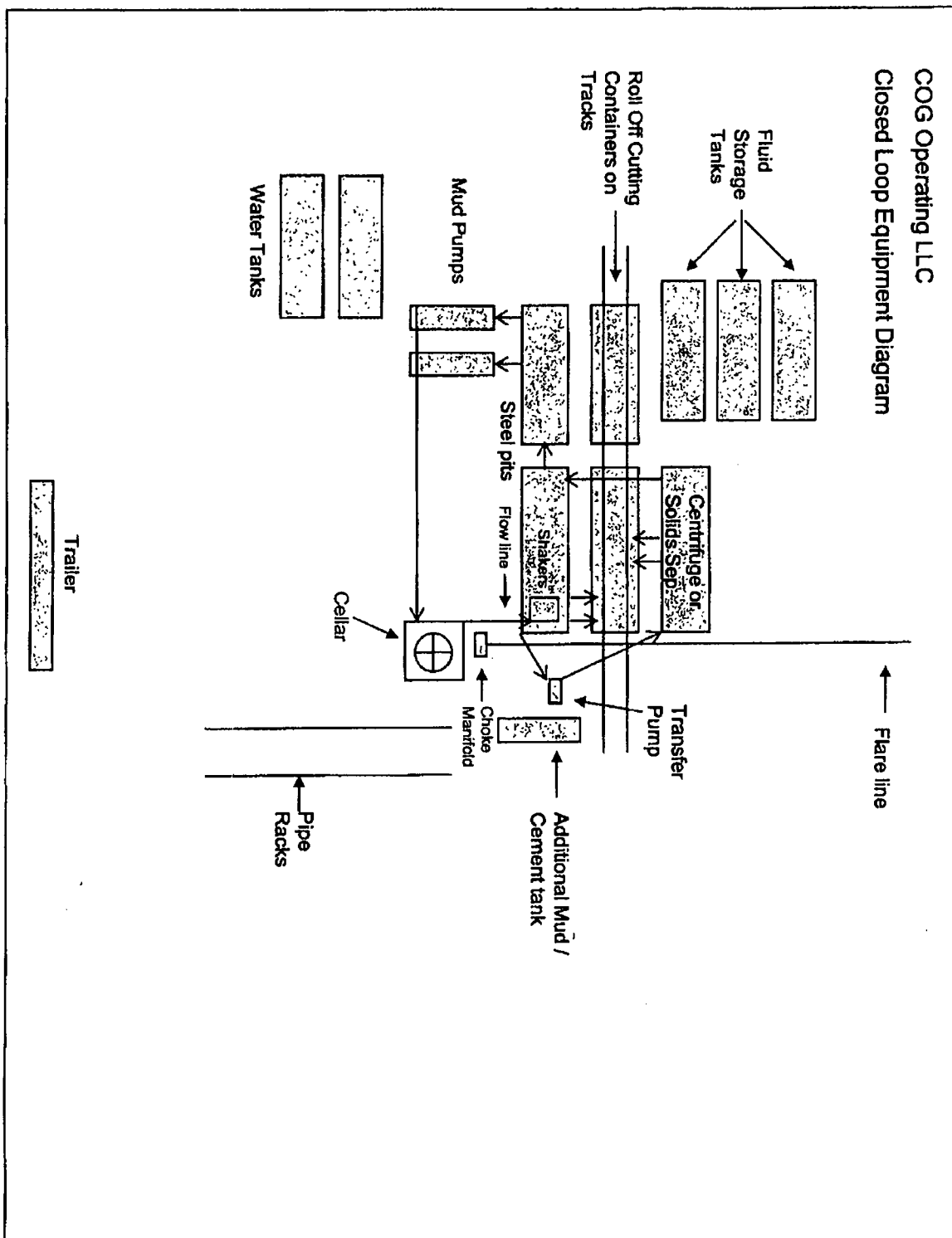
Date: _____

e-mail address: _____

Telephone: _____

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.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MOCD-ARTESIA

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2008
OCT 21 2008
MOCD-ARTESIA

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

| | | |
|--|---|---|
| 1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other | | 5. Lease Serial No. NMNM-95630 |
| 2. Name of Operator COG Operating LLC | | 6. If Indian, Allottee or Tribe Name |
| 3a. Address 550 W. Texas Ave., Suite 1300 Midland, TX 79701 | 3b. Phone No. (include area code) 432-685-4340 | 7. If Unit or CA/Agreement, Name and/or No |
| 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SURFACE: 430' FSL & 430' FWL Section 11, T16S, R28E, UL M BHL: 330' FSL & 330' FEL Section 11, T16S, R28E, UL P | | 8. Well Name and No Blackhawk 11 Federal Com #1 |
| | | 9. API Well No. 30-015-36541 |
| | | 10. Field and Pool, or Exploratory Area Crow Flats, Wolfcamp |
| | | 11. County or Parish, State Eddy County, NM |

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | | |
|--|---|---|--|--|
| <input checked="" type="checkbox"/> Notice of Intent | <input type="checkbox"/> Acidize | <input type="checkbox"/> Deepen | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Subsequent Report | <input type="checkbox"/> Alter Casing | <input type="checkbox"/> Fracture Treat | <input type="checkbox"/> Reclamation | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Final Abandonment Notice | <input type="checkbox"/> Casing Repair | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete | <input checked="" type="checkbox"/> Other Chg pool, casing & cementing program |
| | <input type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon | |
| | <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back | <input type="checkbox"/> Water Disposal | |

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

COG respectfully requests permission:

to change Field and Pool from Wolfcamp to Crow Flats Abo;

to change proposed Casing & Cement Program;

for a variance to the 200' minimum tie back in order to set the pump as close to the formation as possible. The curve and horizontal are all located in the Abo Formation.

Attached is a revised plat and revised Form 3160-3 Drill Plan with changes reflected in shaded areas.
ACCEPTED FOR RECORD

OCT 21 2008

APPROVED

OCT 18 2008

14. I hereby certify that the foregoing is true and correct.
Name (Printed/Typed) Phyllis A. Edwards
Phyllis A. Edwards
Name (Printed/Typed) Gregory Guye, Deputy Field Inspector
Gregory Guye, Deputy Field Inspector
NMOC District II Artesia
Title (Printed/Typed) Field Analyst

Signature

Phyllis A. Edwards

Date

10/08/2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice 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.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. 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)

DISTRICT 1
1626 N French Dr., Hobbs, NM 88240

DISTRICT II
1501 W Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1820 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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | | |
|-----------------------|---|-----------|------------------------------|
| API Number 30-015- | | Pool Code | Pool Name CROW FLATS: ARO |
| Property Code | Property Name BLACKHAWK "11" FEDERAL COM | | Well Number 1 |
| UGRID No 229137 | Operator Name C.O.G. OPERATING L.L.C. | | Elevation 3570' |

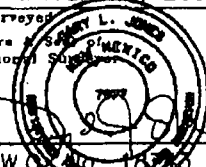
Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| M | 11 | 16 S | 28 E | | 430 | SOUTH | 430 | WEST | EDDY |

Bottom Hole Location If Different From Surface

| | | | | | | | | | |
|-----------------|---------|-----------------|-------|--------------------|---------------|------------------|---------------|----------------|--------|
| UL or lot No. | Section | Township | Range | Lot Ida | Feet from the | North/South line | Feet from the | East/West line | County |
| P | 11 | 16 S | 28 E | | 330 | SOUTH | 330 | EAST | EDDY |
| Dedicated Acres | | Joint or Infill | | Consolidation Code | | Order No. | | | |
| 160 | | | | | | | | | |

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

| | | |
|--|--|---|
| <div style="position: relative;"> <div style="position: absolute; top: 10px; left: 10px; border: 1px solid black; padding: 5px;"> SURFACE LOCATION LAT.: N 32°55'55.47" LONG.: W104°08'13.98" SPC- N.: 702870.627 E.: 596395.029 (NAD-83) </div> <div style="position: absolute; top: 10px; left: 350px; border: 1px solid black; padding: 5px;"> BOTTOM HOLE LOCATION LAT.: N 32°55'54.42" LONG.: W104°08'21.77" SPC- N.: 702772.089 E.: 600844.111 (NAD-83) </div> <div style="position: absolute; top: 100px; left: 100px; font-size: 2em;"> PROJECT AREA PENETRATION POINT </div> </div> | | <h3 style="text-align: center;">OPERATOR CERTIFICATION</h3> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 80%;"> <p style="font-family: cursive; font-size: 1.2em;">Phyllis A. Edwards</p> <p>Signature</p> </div> <div style="width: 15%;"> <p>8-14-08</p> <p>Date</p> </div> </div> <hr/> <p style="text-align: center;">Phyllis A. Edwards</p> <hr/> <p>Printed Name Regulatory Analyst</p> |
| <div style="position: relative;"> <div style="position: absolute; top: 10px; left: 10px; border: 1px solid black; padding: 5px;"> SURFACE LOCATION LAT.: N 32°55'55.47" LONG.: W104°08'13.98" SPC- N.: 702870.627 E.: 596395.029 (NAD-83) </div> <div style="position: absolute; top: 10px; left: 350px; border: 1px solid black; padding: 5px;"> BOTTOM HOLE LOCATION LAT.: N 32°55'54.42" LONG.: W104°08'21.77" SPC- N.: 702772.089 E.: 600844.111 (NAD-83) </div> <div style="position: absolute; top: 100px; left: 100px; font-size: 2em;"> PROJECT AREA PENETRATION POINT </div> </div> | | <h3 style="text-align: center;">SURVEYOR CERTIFICATION</h3> <p>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.</p> <p style="text-align: center; font-size: 1.2em;">DECEMBER 16, 2007</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 80%;"> <p>Date Surveyed</p> <p>Signature <i>Gary L. Jones</i></p> <p>Professional Surveyor</p> </div> <div style="width: 15%; text-align: center;">  </div> </div> <hr/> <p>Certificate No. Gary L. Jones 7977</p> <p style="text-align: center; font-weight: bold;">BASIN SURVEYS</p> |

**ATTACHMENT TO FORM 3160-3
COG Operating LLC
Blackhawk "11" Federal Com # 1
SL: 430' FSL & 430' FWL Unit M
BHL: 330' FSL & 330' FEL Unit P
Sec 11, T16S, R28E
Eddy County, NM**

REVISED 10/08/2008

1. Proration Unit Spacing: 160 Acres
2. Ground Elevation: 3570'
3. Proposed Depths: Pilot hole TD = 6835', Horizontal TVD = 6680', Horizontal MD = 10850'

4. Estimated tops of geological markers:

| | |
|--------------------|---------|
| Quaternary | Surface |
| Yates/Seven Rivers | 385' |
| Queens | 1120' |
| San Andres | 1850' |
| Glorietta | 3375' |
| Abo | 5370' |
| Top Basal Abo | 6585' |

5. Possible mineral bearing formations:

| | | |
|---------------|-------------|-------|
| Water Sand | Fresh Water | 150' |
| San Andres | Oil / Gas | 1850' |
| Glorietta | Oil / Gas | 3375' |
| Abo | Oil / Gas | 5370' |
| Top Basal Abo | Oil / Gas | 6585' |

6. Casing Program

| <u>Hole size</u> | <u>Interval</u> | <u>OD of Casing</u> | <u>Weight</u> | <u>Cond.</u> | <u>Collar</u> | <u>Grade</u> |
|---|---------------------|---------------------|---------------|--------------|---------------|--------------|
| 17-1/2" | 0' - +/-500' | 13-3/8" | 48# | New | STC | H40 |
| Collapse sf - 2.98, Burst sf - 2.33, Tension sf - 13.42 | | | | | | |
| 12-1/4" | 0' - 1800' | 9-5/8" | 40# | New | STC | J-55 |
| Collapse sf - 2.46, Burst sf - 1.35, Tension sf - 6.48 | | | | | | |
| 8-3/4" | 0' - +/-6000'MD | 7" | 28# | New | LTC | P-110 |
| Collapse sf - 2.18, Burst sf - 1.53, Tension sf - 4.37 | | | | | | |
| 6-1/8" | 5900' - +/-10850'MD | 4-1/2" | 11.6# | New | LTC | P-110 |
| Collapse sf - 2.47, Burst sf - 1.64, Tension sf - 4.48 | | | | | | |

**ATTACHMENT TO FORM 3160-3
COG Operating LLC
Blackhawk "11" Federal Com # 1
Page 2 of 3**

7. Cement Program

13 3/8" Surface Casing set at +/- 500', Circ to Surf with +/- 500 sx Class "C" w/ 2% CaCl₂, 1.35 yd.

9 5/8" Intermediate Casing set at +/- 1800', Circ. to Surf with +/- 600 sx 50/50 Poz "C", 2.45 yd. & 200 sx Class "C" w/ 2% CaCl₂, 1.35 yd.

7" Production Casing set at +/- 6000' MD, Cement with +/- 500 sx 50/50/10 "C", 2.45 yd & +/- 200 sx Class "H", 1.18 yd. Est. TOC @ 200' minimum tieback into intermediate casing.

4 1/2" Production Liner set from +/- 5900' to +/- 10850' MD, 6680' TVD. Liner run with +/- 5 isolation Packers and Sliding sleeves in un-cemented lateral.

8. Pressure Control Equipment:

After setting 13 3/8" casing and installing 3000 psi casing head, NU 13 5/8" 3000 psi annular BOP. Test annular BOP, casing and manifold with clear fluid to 1000 psi w/ rig pump.

After setting 9 5/8" casing and installing 3000 psi casing spool, NU 3000 psi double ram BOP and 3000 psi annular BOP. Test double ram BOP and manifold to 3000# with clear fluid and annular to 1500 psi using an independent tester, this equipment will be used continuously until TD is reached. Blind rams will be operationally checked on each trip out of hole. Pipe rams will be operationally checked each 24 hour period. These checks will be noted on daily tour sheets. Other accessories to the BOP equipment include a Kelly cock and floor safety valves, choke lines and choke manifold with 3000 psi WP rating.

9. Proposed Mud Circulating System

| Interval | Mud Wt. | Visc. | FL | Type Mud System |
|----------------|---------|-------|----|---|
| 0' - 500' | 8.5 | 28 | NC | Fresh water native mud w/ paper for seepage and sweeps. Lime for PH. |
| 500' - 1800' | 9.1 | 30 | NC | Cut brine mud, lime for PH and paper for seepage and sweeps. |
| 1800' - 6835' | 9.1 | 29 | NC | Drill section with fresh water/cut brine circulating the reserve utilizing periodic sweeps of paper as needed for seepage control and solids removal. |
| 6000' - 10850' | 9.5 | 36 | 10 | Drill horizontal section with XCD polymer / cut brine / starch. |

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.

10. Production Hole Drilling Summary:

Drill 8-3/4" pilot hole thru Top Basal Abo to +/- 6835', run open hole logs. Spot 350 sx "H" Kick off plug from +/- 6600' to +/- 5900'. Dress off to 6000' and set 7" production casing. Drill 6-1/8" hole and kick off at +/- 6200', building curve over +/- 350' to horizontal at 6610' TVD. Drill horizontal section in an easterly direction for +/- 4400' lateral to TD at +/- 10850' MD. Run 4-1/2" production liner in Open hole lateral and set isolation packers and liner top packer @ +/- 5900' MD.

**ATTACHMENT TO FORM 3160-3
COG Operating LLC
Blackhawk "11" Federal # 1
Page 3 of 3**

11. 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.

12. 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. in Pilot hole to 9 5/8" casing shoe.
- B. The mud logging program will consist of lagged 10' samples from intermediate casing point to T.D. in vertical pilot hole and from Kick off point to TD in Horizontal hole.
- C. Drill Stem test is not anticipated.
- D. No conventional coring is anticipated.
- E. Further testing procedures will be determined after the 4 1/2" production liner packers have been installed at TD based on drill shows and log evaluation.

13. 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 2838 psig. Low levels of Hydrogen sulfide have been monitored in producing wells in the area, so H2S may be present while drilling of the well. An H2S plan is attached to the Drilling Program. No major loss of circulation zones has been reported in offsetting wells.

14. Anticipated Starting Date

Drilling operations will commence approximately on November 1, 2008 with drilling and completion operations lasting approximately 90 days.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTJUL 29 2009
OCD-ARTESIAFORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

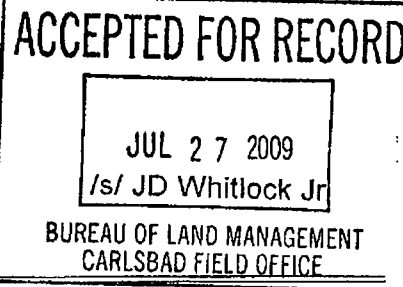
| | | |
|--|---|--|
| SUBMIT IN TRIPLICATE- Other instructions on reverse side. | | 5. Lease Serial No. NM-95630 |
| 1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other | | 6. If Indian, Allottee or Tribe Name |
| 2. Name of Operator COG Operating LLC | | 7. If Unit or CA/Agreement, Name and/or No |
| 3a. Address 550 W. Texas Ave., Suite 1300 Midland, TX 79701 | 3b. Phone No. (include area code) 432-685-4340 | 8. Well Name and No. Blackhawk 11 Federal #1 |
| 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SHL 430 FSL & 430 FWL Sec.11, T16S, R28E, Unit M BHL 330 FSL & 330 FEL Sec.11, T16S, R28E, Unit P | | 9. API Well No. 30-015-36541 |
| | | 10. Field and Pool, or Exploratory Area Crow Flats; Abo |
| | | 11. County or Parish, State Eddy, NM |

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | | |
|--|---|---|--|---|
| <input checked="" type="checkbox"/> Notice of Intent | <input type="checkbox"/> Acidize | <input type="checkbox"/> Deepen | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Subsequent Report | <input type="checkbox"/> Alter Casing | <input type="checkbox"/> Fracture Treat | <input type="checkbox"/> Reclamation | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Final Abandonment Notice | <input type="checkbox"/> Casing Repair | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete | <input checked="" type="checkbox"/> Other Corrected Statement |
| | <input type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon | Responsibility for |
| | <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back | <input type="checkbox"/> Water Disposal | Operations |

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomple in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

COG respectfully requests permission to correct the Statement Accepting Responsibility for Operations for the Blackhawk 11 Federal #1. The Lease Number for the bottom hole location was incorrect on the original APD. The corrected statement is attached.



| | | |
|--|--------------------|--------------------------|
| 14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Phyllis A. Edwards | | Title Regulatory Analyst |
| Signature <i>Phyllis A. Edwards</i> | Date 06/18/2009 | |
| THIS SPACE FOR FEDERAL OR STATE OFFICE USE | | |
| Approved by Conditions of approval, if any, are attached. Approval of this notice 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. | Title Office | Date |
| Title 18 U.S.C. Section 1001 and Title 43 U.S.C. 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)

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

COG Operating LLC (229137)
550 West Texas Avenue, Suite 1300
Midland, TX 79701

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

Least No – Surface Location: State of New Mexico
Lease No – Bottom Hole Location: VB1111

Well Name: Blackhawk "11" Federal #1

Legal Description of Land: SHL: 430 FSL & 430 FWL, UL M
BHL: 330 FSL & 330 FWL, UL P
Section 11, T16S, R28E
Eddy County, NM

Formation(s) (if applicable): Wolfcamp – Crow Flats

Bond Coverage: \$25,000 Statewide Bond of COG Operating LLC

BLM Bond File No: NMB 000215

6-9-09

Date

John Coffman

John Coffman
COG Operating LLC

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other Instructions on reverse side.

1 Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2 Name of Operator
COG Operating LLC

3a Address
550 W. Texas Ave., Suite 1300 Midland, TX 79701

3b Phone No. (include area code)
432-685-4340

4 Location of Well (Footage, Sec., T., R., M., or Survey Description)

VARIOUS

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

5 Lease Serial No
VARIOUS

6 If Indian, Allottee or Tribe Name

7 If Unit or CA/Agreement, Name and/or No

8 Well Name and No
VARIOUS

9 API Well No.
VARIOUS

10 Field and Pool, or Exploratory Area
VARIOUS

11 County or Parish, State
VARIOUS

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | | |
|--|---|---|--|--|
| <input checked="" type="checkbox"/> Notice of Intent | <input type="checkbox"/> Acidize | <input type="checkbox"/> Deepen | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Subsequent Report | <input type="checkbox"/> Alter Casing | <input type="checkbox"/> Fracture Treat | <input type="checkbox"/> Reclamation | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Final Abandonment Notice | <input type="checkbox"/> Casing Repair | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete | <input checked="" type="checkbox"/> Other Amend attached |
| | <input type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon | List of APD's |
| | <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back | <input type="checkbox"/> Water Disposal | |

13 Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Regarding the attached list of APD's and locations, please be advised that:

COG Operating LLC will purchase onsite caliche from the BLM to be purchased at the current rate set by the BLM.

The topsoil will be stockpiled and used during interim reclamation.

In the event that onsite caliche is not available, COG will purchase caliche from a BLM caliche pit at the current rate set by the BLM.

In the event that there is no BLM caliche pit within five miles of the location, COG will obtain caliche from a state or private pit.

ORIGINAL SUNDRIES TO: Bureau of Land Management in Carlsbad and Roswell, NM

*BLM Reserves the right to recede at any time if process altered.

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Phyllis Edwards

Title Regulatory Analyst

Signature

Phyllis Edwards

Date

12/10/2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

James R. Davis

Title

SEPS

Date

1-5-10

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

CFD

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. 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)

EDDY COUNTY, NM

| Well Name | County | API # | Lease Number | Location | Sec, Township, Range |
|---------------------------|--------|------------|--------------|--------------------|----------------------------|
| Blackhawk 11 Federal 1 | Eddy | 3001536541 | NMNM95630 | 430 FSL, 430 FWL | Sec 11, T16S, R28E, Unit M |
| Blackhawk 11 Federal 2H | Eddy | 3001537108 | NMNM95630 | 1800 FSL, 1590 FWL | Sec 11, T16S, R28E, Unit K |
| Blitzen 35 Federal 1 | Eddy | 3001536044 | STATE | 330 FNL, 990 FEL | Sec 35, T16S, R28E, Unit A |
| | | BHL | NMNM103876 | 330 FNL, 330 FWL | Sec 35, T16S, R28E, Unit D |
| Blitzen 35 Federal 2 | Eddy | 3001536058 | STATE | 1800 FNL, 330 FEL | Sec 35, T16S, R28E, Unit H |
| | | BHL | NMNM103876 | 1800 FNL, 330 FWL | Sec 35, T16S, R28E, Unit E |
| Blue Thunder 5 Fed #2 | Eddy | 3001535550 | NMLC069033 | 1200 FNL, 1980 FWL | Sec 5, T19S, R31E, Unit C |
| Caddo Federal #8 | Eddy | 3001536672 | NMNM2933 | 330 FNL 1650 FEL | Sec 17, T17S, R30E, Unit B |
| Caribou 19 Federal Com #1 | Eddy | 3001536540 | NMNM103873 | 430 FSL, 430 FEL | Sec 19, T18S, R28E, Unit P |
| Caribou 19 Federal Com #2 | Eddy | 3001536539 | NMNM103873 | 1980 FSL, 790 FEL | Sec 19, T16S, R28E, Unit I |
| Carmen Federal #2 | Eddy | | NMLC029020M | 2423 FNL 1814 FWL | Sec 3, T17S, R30E, Unit F |
| Dexter Federal #10 | Eddy | 3001537351 | NMLC029020G | 1485 FSL 865 FEL | Sec 22, T17S, R30E, Unit I |
| Dexter Federal #14 | Eddy | 3001537352 | NMLC029020G | 1650 FSL 1650 FWL | Sec 22, T17S, R30E, Unit K |
| Donner 30 Federal Com #4 | Eddy | 3001536715 | NMNM054856 | 330 FNL, 330 FEL | Sec 30, T16S, R28E, Unit A |
| Electra Federal #38 | Eddy | 3001537080 | NMNM074935 | 870 FNL, 2310 FWL | Sec 15, T17S, R30E, Unit C |
| Electra Federal #39 | Eddy | 3001537082 | NMNM074935 | 990 FNL, 330 FWL | Sec 15, T17S, R30E, Unit D |
| Electra Federal #40 | Eddy | 3001537081 | NMNM074935 | 330 FNL, 990 FWL | Sec 15, T17S, R30E, Unit D |
| Electra Federal #41 | Eddy | 3001537087 | NMNM074935 | 675 FSL, 1175 FWL | Sec 10, T17S, R30E, Unit M |
| Electra Federal #42 | Eddy | 3001537086 | NMNM074935 | 1110 FSL, 330 FWL | Sec 10, T17S, R30E, Unit M |
| Electra Federal #43 | Eddy | 301536961 | NMNM074935 | 745 FSL, 1680 FWL | Sec 10, T17S, R30E, Unit N |
| Electra Federal #44 | Eddy | 3001537088 | NMNM074935 | 350 FSL, 2495 FWL | Sec 10, T17S, R30E, Unit N |
| Electra Federal #45 | Eddy | 3001537226 | NMNM074935 | 2185 FSL, 370 FWL | Sec 10, T17S, R30E, Unit L |
| Electra Federal #46 | Eddy | 3001537107 | NMNM074935 | 1735 FNL, 930 FWL | Sec 10, T17S, R30E, Unit L |
| Electra Federal #47 | Eddy | 3001537223 | NMNM0467931 | 2310 FSL, 1650 FWL | Sec 10, T17S, R30E, Unit K |
| Electra Federal #48 | Eddy | 3001537279 | NMNM0467931 | 1650 FSL, 2310 FWL | Sec 10, T17S, R30E, Unit K |
| Electra Federal #50 | Eddy | | NMNM074935 | 2490 FNL, 1140 FWL | Sec 10, T17S, R30E, Unit E |
| Electra Federal #54 | Eddy | 3001537247 | NMNM074935 | 2310 FNL, 1650 FEL | Sec 10, T17S, R30E, Unit G |
| Electra Federal #57 | Eddy | | NMNM074935 | 485 FNL, 990 FWL | Sec 10, T17S, R30E, Unit D |
| Electra Federal #59 | Eddy | | NMNM074935 | 1065 FNL, 2310 FWL | Sec 10, T17S, R30E, Unit C |
| Electra Federal #61 | Eddy | | NMNM074935 | 786 FNL, 1977 FEL | Sec 10, T17S, R30E, Unit B |
| Electra Federal #63 | Eddy | 3001537225 | NMNM074935 | 790 FNL, 330 FEL | Sec 10, T17S, R30E, Unit A |
| Folk Fed #13 | Eddy | 3001536863 | NMNM0397623 | 990 FNL, 2310 FEL | Sec 17, T17S, R29E, Unit B |
| Folk Fed #21 | Eddy | | NMNM0397623 | 330 FNL, 1650 FWL | Sec 17, T17S, R29E, Unit C |
| Folk Fed #29 | Eddy | | NMNM0397623 | 1650 FNL, 1650 FWL | Sec 17, T17S, R29E, Unit F |
| Folk Fed #31 | Eddy | | NMNM0397623 | 2310 FNL, 2310 FEL | Sec 17, T17S, R29E, Unit G |
| Folk Fed #36 | Eddy | 3001537246 | NMNM0397623 | 1520 FSL, 1550 FWL | Sec 17, T17S, R29E, Unit K |
| Folk Fed #38 | Eddy | | NMNM0397623 | 1500 FSL, 2310 FWL | Sec 17, T17S, R29E, Unit K |
| Folk Fed #41 | Eddy | | NMNM0397623 | 2540 FSL, 400 FWL | Sec 17, T17S, R29E, Unit L |
| Folk Fed #5 | Eddy | 3001536747 | NMNM0397623 | 1250 FNL, 330 FWL | Sec 17, T17S, R29E, Unit D |

EDDY COUNTY, NM

| Well Name | County | API # | Lease Number | Location | Sec, Township, Range |
|---------------------------------|--------|------------|--------------|--------------------|----------------------------|
| Gissler Federal #26 | Eddy | | NMNM83591 | 80 FSL 310 FEL | Sec 5, T17S, R30E, Unit P |
| Harvard Federal #13 | Eddy | | NMLC029338B | 330 FNL 990 FEL | Sec 11, T17S, R30E, Unit A |
| Harvard Federal #14 | Eddy | | NMLC029338B | 990 FNL 510 FEL | Sec 11, T17S, R30E, Unit A |
| Harvard Federal #15 | Eddy | 3001537307 | NMLC029338B | 1845 FNL 811 FEL | Sec 11, T17S, R30E, Unit H |
| Harvard Federal #16 | Eddy | | NMLC029338B | 2310 FNL 330 FEL | Sec 11, T17S, R30E, Unit H |
| Harvard Federal #17 | Eddy | | NMLC029338B | 330 FNL 990 FWL | Sec 12, T17S, R30E, Unit D |
| Harvard Federal #18 | Eddy | | NMLC029338B | 990 FNL 990 FWL | Sec 12, T17S, R30E, Unit D |
| Harvard Federal #20 | Eddy | | NMLC029338B | 2310 FNL 990 FWL | Sec 12, T17S, R30E, Unit E |
| High Lonesome 23 Federal Com 2H | Eddy | 3001537221 | NMNM118710 | 1980 FSL, 430 FEL | Sec 23, T16S, R29E, Unit I |
| High Lonesome 24 Federal Com 1H | Eddy | | NMNM118710 | 990 FNL, 360 FWL | Sec 24, T16S, R29E, Unit D |
| High Lonesome 25 Federal Com 1H | Eddy | 3001537275 | NMNM118710 | 430 FNL, 680 FWL | Sec 25, T16S, R29E, Unit D |
| High Lonesome 26 Federal Com 2H | Eddy | 3001535894 | NMNM118710 | 2030 FNL, 530 FEL | Sec 26, T16S, R29E, Unit H |
| Holder CB Federal #16 | Eddy | 3001536871 | NMLC056551A | 2310 FSL 330 FWL | Sec 9, T17S, R30E, Unit L |
| Holder CB Federal #19 | Eddy | 3001537276 | NMLC056551A | 330 FSL 990 FWL | Sec 9, T17S, R30E, Unit M |
| Impala 18 Fed Com 1H | Eddy | 3001536865 | NMNM103871 | 430 FSL, 430 FWL | Sec 18, T16S, R28E, Unit M |
| Loco Hills SWD 3-34 | Eddy | 3001537270 | NMNM0384574 | 1375 FSL, 2555 FEL | Sec 34, T17S, R30E, Unit J |
| Loco Hills SWD 4-33 | Eddy | 3001537269 | NMNM028936D | 840 FSL, 660 FEL | Sec 33, T17S, R30E, Unit P |
| McIntyre A East #20 | Eddy | 3001536909 | NMLC054280 | 1585 FSL, 525 FEL | Sec 20, T17S, R30E, Unit I |
| McIntyre DK Federal #15 | Eddy | 3001535475 | NMNM86025 | 330 FSL, 2250 FWL | Sec 17, T17S, R30E, Unit N |
| McIntyre DK Federal #16 | Eddy | 3001535476 | NMNM86025 | 330 FSL, 990 FWL | Sec 17, T17S, R30E, Unit M |
| McIntyre DK Federal #17 | Eddy | | NMNM86025 | 990 FSL, 330 FWL | Sec 17, T17S, R30E, Unit M |
| Miranda Federal 1 | Eddy | 3001537320 | NMLC0029342D | 2310 FNL 1650 FWL | Sec 9, T17S, R30E, Unit F |
| Miranda Federal 2 | Eddy | 3001537332 | NMLC0029342D | 2130 FNL 2260 FEL | Sec 9, T17S, R30E, Unit G |
| Miranda Federal 3 | Eddy | 3001537318 | NMLC0029342D | 2185 FNL 1290 FEL | Sec 9, T17S, R30E, Unit H |
| Miranda Federal 4 | Eddy | 3001537319 | NMLC0029342D | 990 FNL 1890 FWL | Sec 9, T17S, R30E, Unit C |
| Miranda Federal 5 | Eddy | 3001537317 | NMLC0029342D | 870 FNL 2310 FEL | Sec 9, T17S, R30E, Unit B |
| Miranda Federal 6 | Eddy | 3001537315 | NMLC0029342D | 990 FNL 990 FEL | Sec 9, T17S, R30E, Unit A |
| Moose 23 Fed 2H | Eddy | 3001537101 | NMNM117117 | 800 FNL, 660 FWL | Sec 23, T16S, R28E, Unit D |
| Polaris B Federal 22 | Eddy | 3001536708 | NMLC029342B | 1650 FSL 330 FEL | Sec 9, T17S, R30E, Unit I |
| Polaris B Federal 23 | Eddy | 3001536709 | NMLC029342B | 2270 FSL 2310 FEL | Sec 9, T17S, R30E, Unit J |
| Polaris B Federal 27 | Eddy | 3001536666 | NMLC029342B | 790 FSL 1650 FWL | Sec 9, T17S, R30E, Unit N |
| Polaris B Federal 28 | Eddy | 3001536684 | NMLC029342B | 330 FSL 2110 FWL | Sec 9, T17S, R30E, Unit N |
| Polaris B Federal 29 | Eddy | 3001536685 | NMLC029342B | 500 FSL 2310 FEL | Sec 9, T17S, R30E, Unit O |
| Polaris B Federal 30 | Eddy | 3001536893 | NMLC029342B | 330 FSL 1750 FEL | Sec 9, T17S, R30E, Unit O |
| Polaris B Federal 32 | Eddy | 3001536687 | NMLC029342B | 630 FSL 780 FEL | Sec 9, T17S, R30E, Unit P |
| Reindeer 21 Federal #4 | Eddy | 3001536542 | NMNM100844 | 1980 FSL, 430 FWL | Sec 21, T16S, R28E, Unit L |
| RJ Unit #141 | Eddy | 3001537140 | NMLC028775B | 1090 FSL, 1573 FWL | Sec 27, T17S, R29E, Unit N |
| RJ Unit #142 | Eddy | 3001537139 | NMLC028775B | 1753 FSL, 2188 FWL | Sec 27, T17S, R29E, Unit K |
| RJ Unit #143 | Eddy | 3001537138 | NMLC028775B | 564 FSL, 2630 FWL | Sec 27, T17S, R29E, Unit N |
| Rudolph Federal #1 | Eddy | 3001535426 | NMNM100844 | 330 FSL, 1650 FWL | Sec 21, T16S, R28E, Unit N |
| Rudolph Federal #2 | Eddy | 3001535421 | NMNM100844 | 990 FSL, 1650 FEL | Sec 21, T16S, R28E, Unit O |
| Rudolph Federal #3 | Eddy | 3001535422 | NMNM100844 | 2310 FSL, 1650 FEL | Sec 21, T16S, R28E, Unit J |

EDDY COUNTY, NM

| Well Name | County | API # | Lease Number | Location | Sec, Township, Range |
|-------------------------|--------|------------|--------------|--------------------|----------------------------|
| Skelly Unit #613 | Eddy | 3001537186 | NMNM98120 | 2410 FSL, 1600 FWL | Sec 23, T17S, R31E, Unit K |
| Skelly Unit #614 | Eddy | | NMNM98120 | 2310 FSL, 2310 FEL | Sec 23, T17S, R31E, Unit J |
| Skelly Unit #620 | Eddy | 3001536779 | NMLC029418A | 1850 FSL, 990 FWL | Sec 14, T17S, R31E, Unit L |
| Skelly Unit #623 | Eddy | 3001536833 | NMNM98120 | 330 FNL, 2150 FWL | Sec 14, T17S, R31E, Unit C |
| Skelly Unit #626 | Eddy | 3001536980 | NMLC029419A | 2210 FNL, 990 FWL | Sec 22, T17S, R31E, Unit E |
| Skelly Unit #634 | Eddy | 3001536985 | NMLC029418A | 200 FSL, 2355 FWL | Sec 14, T17S, R31E, Unit N |
| Skelly Unit #635 | Eddy | | NMLC029420A | 1430 FSL, 2230 FWL | Sec 15, T17S, R31E, Unit K |
| Skelly Unit #642 | Eddy | | NMLC029418A | 695 FNL, 530 FEL | Sec 14, T17S, R31E, Unit A |
| Skelly Unit #651 | Eddy | | NM98120 | 990 FNL, 990 FEL | Sec 14, T17S, R31E, Unit A |
| Skelly Unit #654 | Eddy | | NMNM98120 | 990 FNL, 990 FWL | Sec 14, T17S, R31E, Unit D |
| Skelly Unit #655 | Eddy | | NMNM98120 | 990 FNL, 1650 FEL | Sec 14, T17S, R31E, Unit B |
| Skelly Unit #658 | Eddy | | NMNM98120 | 990 FNL, 2310 FWL | Sec 14, T17S, R31E, Unit C |
| Skelly Unit #660 | Eddy | 3001537245 | NMLC029418A | 1265 FSL, 1173 FEL | Sec 14, T17S, R31E, Unit P |
| Skelly Unit #665 | Eddy | | NMLC029418A | 1977 FNL, 640 FEL | Sec 14, T17S, R31E, Unit H |
| Skelly Unit #672 | Eddy | | NMNM98120 | 1650 FSL, 1650 FEL | Sec 14, T17S, R31E, Unit J |
| Skelly Unit #675 | Eddy | | NMNM98120 | 2310 FNL, 330 FEL | Sec 14, T17S, R31E, Unit H |
| Skelly Unit #678 | Eddy | | NMLC029418A | 2500 FNL, 990 FWL | Sec 14, T17S, R31E, Unit E |
| Skelly Unit #679 | Eddy | | NMNM98120 | 2310 FNL, 1650 FEL | Sec 14, T17S, R31E, Unit G |
| Skelly Unit #682 | Eddy | | NMLC029418A | 2310 FNL, 2290 FWL | Sec 14, T17S, R31E, Unit F |
| Skelly Unit #689 | Eddy | | NMNM98122 | 330 FNL, 330 FWL | Sec 21, T17S, R31E, Unit D |
| Skelly Unit #700 | Eddy | | NMNM98122 | 990 FNL, 2310 FWL | Sec 21, T17S, R31E, Unit D |
| Skelly Unit #711 | Eddy | | NMNM98122 | 1650 FNL, 330 FWL | Sec 21, T17S, R31E, Unit E |
| Skelly Unit #724 | Eddy | | NMNM98122 | 2310 FNL, 990 FWL | Sec 21, T17S, R31E, Unit E |
| Skelly Unit #767 | Eddy | SHL | NMLC029418A | 140 FSL, 1115 FEL | Sec 14, T17S, R31E, Unit P |
| Skelly Unit #767 | Eddy | BHL | NMLC029418A | 330 FNL, 990 FEL | Sec 23, T17S, R31E, Unit A |
| Skelly Unit #771 | Eddy | | NMLC029418A | 330 FNL, 2310 FWL | Sec 23, T17S, R31E, Unit C |
| Skelly Unit #783 | Eddy | | NMLC029418A | 990 FNL, 1650 FWL | Sec 23, T17S, R31E, Unit B |
| Skelly Unit #795 | Eddy | | NMNM98120 | 1525 FNL, 990 FEL | Sec 23, T17S, R31E, Unit H |
| Skelly Unit #819 | Eddy | | NMLC029420A | 670 FNL, 771 FWL | Sec 15, T17S, R31E, Unit D |
| Skelly Unit #820 | Eddy | | NMLC029420A | 330 FNL, 990 FEL | Sec 15, T17S, R31E, Unit A |
| Skelly Unit #823 | Eddy | | NMLC029420A | 330 FNL, 1650 FWL | Sec 15, T17S, R31E, Unit C |
| Skelly Unit #824 | Eddy | | NMLC029420A | 430 FNL, 2310 FWL | Sec 15, T17S, R31E, Unit C |
| Skelly Unit #829 | Eddy | | NMLC029420A | 990 FNL, 990 FEL | Sec 15, T17S, R31E, Unit A |
| Skelly Unit #832 | Eddy | | NMLC029420A | 990 FNL, 990 FWL | Sec 15, T17S, R31E, Unit D |
| Skelly Unit #833 | Eddy | | NMLC029420A | 990 FNL, 1650 FEL | Sec 15, T17S, R31E, Unit B |
| Skelly Unit #836 | Eddy | | NMLC029420A | 990 FNL, 2310 FWL | Sec 15, T17S, R31E, Unit C |
| Skelly Unit #849 | Eddy | | NMLC029420A | 1650 FSL, 2310 FEL | Sec 15, T17S, R31E, Unit J |
| Skelly Unit #978 | Eddy | 3001536062 | NMLC029419A | 330 FNL, 2310 FEL | Sec 22, T17S, R31E, Unit B |
| Skelly Unit #980 | Eddy | 3001536063 | NMLC029419A | 990 FNL, 2310 FWL | Sec 22, T17S, R31E, Unit C |
| Skelly Unit #982 | Eddy | 3001536515 | NMLC029419A | 990 FNL, 330 FEL | Sec 22, T17S, R31E, Unit A |
| Skelly Unit #987 | Eddy | 3001536497 | NMLC029419A | 1800 FNL, 2300 FEL | Sec 22, T17S, R31E, Unit G |
| Skelly Unit #995 | Eddy | 3001536473 | NMLC029419A | 990 FSL, 860 FWL | Sec 15, T17S, R31E, Unit M |
| Tex-Mack 11 Federal #10 | Eddy | 3001536851 | NMLC029418B | 500 FNL, 2030 FEL | Sec 11, T17S, R31E, Unit B |
| Tex-Mack 11 Federal #11 | Eddy | | NMLC029418B | 330 FNL, 330 FEL | Sec 11, T17S, R31E, Unit A |
| Tex-Mack 11 Federal #5 | Eddy | 3001536847 | NMLC029418B | 800 FSL, 600 FEL | Sec 11, T17S, R31E, Unit P |
| Tex-Mack 11 Federal #27 | Eddy | | NMLC029418B | 990 FNL, 990 FEL | Sec 11, T17S, R31E, Unit A |
| Tex-Mack 11 Federal #35 | Eddy | | NMLC029418B | 990 FSL, 990 FWL | Sec 11, T17S, R31E, Unit M |
| Tex-Mack 11 Federal #39 | Eddy | | NMLC029418B | 990 FNL, 2310 FWL | Sec 11, T17S, R31E, Unit N |
| Tex-Mack 11 Federal #54 | Eddy | | NMLC029418B | 2310 FNL, 495 FEL | Sec 11, T17S, R31E, Unit H |
| Tex-Mack 11 Federal #6 | Eddy | 3001536848 | NMLC029418B | 1650 FNL, 1660 FWL | Sec 11, T17S, R31E, Unit F |
| Tex-Mack 11 Federal #9 | Eddy | 3001536945 | NMLC029418B | 2630 FSL, 2580 FWL | Sec 11, T17S, R31E, Unit K |
| Wooley Federal #11 | Eddy | 3001535472 | NMLC029342A | 990 FSL, 1650 FWL | Sec 21, T17S, R30E, Unit N |