N.M. Oil Cons. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

RECEIVED AUG 2006 OCD - ARTESIA

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. **BLM 114344**

6. If Indian, Allotee or Tribe Name **N/A**

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

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. **Macanudo 35 Federal Com #1** 36008

2. Name of Operator **BC Operating**

9. API Well No. 30-005-63857

3a. Address **731 W. Wadley, Ste. L-200, Midland, TX 79705**

3b. Phone No. *(include area code)* **(432) 684-9696**

10. Field and Pool, or Exploratory Wildcat **Wolfcamp; (Gas)** 97489

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **660' FSL & 1980' FEL**
At proposed prod. zone **660' FNL & 1980' FEL**

11. Sec., T. R. M. or Blk. and Survey or Area **Section 35, T13S, R27E**

14. Distance in miles and direction from nearest town or post office* **Approximately 12 miles NE of Haggerman, New Mexico**

12. County or Parish **Chaves County**

13. State **NM**

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) **660'**

16. No. of acres in lease **1960**

17. Spacing Unit dedicated to this well **320**

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. **N/A**

19. Proposed Depth **5900' TVD - 9950 TMD**

20. BLM/BIA Bond No. on file **432-564 $50,000**

21. Elevations (Show whether DF, KDB, RT, GL, etc.) **3546 GL**

22. Approximate date work will start* **07/21/2006**

23. Estimated duration **1/21/07**

24. Attachments

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

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

25. Signature [signature] | Name *(Printed/Typed)* **W.E. (Ellis) Gray Jr.** | Date **06/16/2006**

Title **Gray Surface Specialties, Agent for BC Operating, Inc.**

Approved by *(Signature)* /S/ Larry D. Bray | Name *(Printed/Typed)* | Date AUG 23 2006

Title **Assistant Field Manager, Lands And Minerals** | Office ROSWELL 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.

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)

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS ATTACHED

EXHIBIT "E"

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
811 South First, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

Energy, Minerals and Natural Resources Department

Form C-102
Revised March 17, 1999

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
		Wildcat; Wolfcamp

Property Code	Property Name	Well Number
	MACANUDO "35" FEDERAL COM	1

OGRID No.	Operator Name	Elevation
160825	BC OPERATING, INC.	3546'

Surface Location

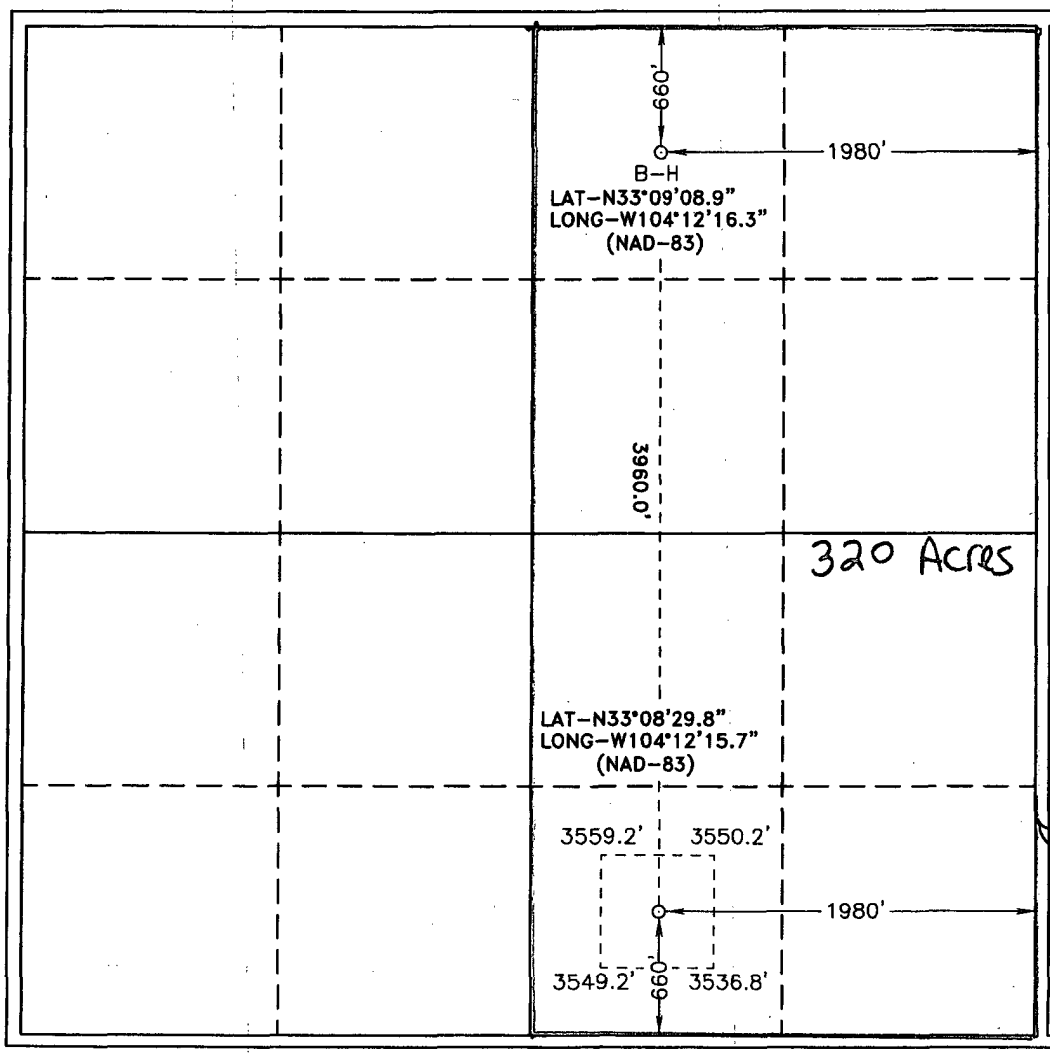
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	35	13 S	27 E		660	SOUTH	1980	EAST	CHAVES

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
B	35	13 S	27 E		660	NORTH	1980	EAST	CHAVES

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

W. E. (Ellis) Gray Jr.
Printed Name

Agent for BC operating inc.
Title

6/21/06
Date

SURVEYOR CERTIFICATION

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

MAY 22, 2006
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL SURVEYOR

No. 6083

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

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

BC Operating, Inc.
Macanudo "35" Federal Com #1
Section 35, T-13-S, R-27-E
Chaves County, New Mexico

LOCATED
12 miles northeast of Hagerman, New Mexico

OIL & GAS LEASE
BLM 114344

RECORD LESSEE
Crown Oil Partners
731 W. Wadley, Ste. L-200
Midland, Tx 79705

BOND COVERAGE
$50,000 statewide bond of BC Operating, Inc.

ACRES IN LEASE
1960

GRAZING LEASE
Allotment # 6507 – Wiggins Place
Wilson Stephens & Wilson
PO Box 91
Hagerman, NM 88232

POOL
Chaves Co. undesignated, Wolfcamp; (Gas)

EXHIBITS

A	Area Road Map
B	Drilling Rig Layout
C	Vicinity Oil & Gas Map
D	Topographic & Location Verification Maps
E	Well Location & Acreage Dedication Map
F	BOPE Schematic
F-1	Choke Manifold – 5M Service

This well will be drilled to a depth of approximately 5700'.

1. **EXISTING ROADS**

   A. Exhibit A is a portion of a section map showing the location of the proposed well as staked.

   B. Exhibit C is a plat showing existing roads in the vicinity of the proposed well site.

   C. Directions to well location:
   FROM THE JUNCTION OF STATE HWY 249 AND QUAIL GO WEST THEN NORTH TO COUNTY ROAD 14 THENCE NORTH ON LEASE ROAD 1.2 MILE TO LEASE ROAD; THENCE 3.6 MILES EAST ON LEASE ROAD TO LEASE ROAD; THENCE SOUTH 0.8 MILE TO PROPOSED LEASE ROAD.

2. **ACCESS ROADS**

   A. Length and Width

      The access road will be built and is shown on Exhibits "D-1 through D-8"

   B. Surface Material

      Existing

   C. Maximum Grad

      Less than five percent

   D. Turnouts

      As necessary

   E. Drainage Design

      Existing

   F. Culverts

      As necessary

   G. Gates and Cattle Guards
      As needed

3. **LOCATION OF EXISITING WELLS**

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

4. **LOCATION OF EXISTING AND/OR PROPOSED FACILITIES**

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

5. **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 Exhibits "D-1 through D-8".

6. **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.

7. **ANCILLARY FACILITIES**

   None required.

8. **WELL SITE LAYOUT**

   Exhibit B shows the relative location and dimensions of the well pad, mud pits, reserve pit, and trash pit, and the location of major rig components.

9. 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.

10. OTHER INFORMATION

A. Topography

The land surface at the well site is rolling native grass with a regional slope being to the south east.

B. Soil

Topsoil at the well site is sandy soil.

C. Flora and Fauna

The location is in an area sparsely covered with shinery and range grasses.

D. Ponds and Streams

There are no rivers, lakes, ponds, or streams in the area.

E. Residences and Other Structures

There are no residences within a mile of the proposed well site.

F. Archaeological, Historical, and Cultural sites

None observed on this area.

G. Land Use

Grazing

H. Surface Ownership

Bureau of Land Management

11. OPERATOR'S REPRESENTATIVE

W.E (Ellis) Gray Jr.
3106 N. Big Spring St, Ste. 100
Midland, Texas 79705
Office: (432) 685-9158

12. 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 preformed by the BC Operating, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

6/16/2006
Date

W. E. (Ellis) Gray Jr.
Gray Surface Specialties
Agent for BC Operating, Inc.

BC Operating
Macanudo 35 Federal Com #1
SL: 660' FSL & 1980' FEL
BHL: 660' FNL & 1980' FEL
Sec.35-T13S-R27E
Chaves County, NM

1. Proposed drilling depth and well plan:

   Drill 7 7/8" hole to a TVD of +/- 6000'. Run logs. Set cement kick off plug from +/-6000'- +/- 5500' Kick well off at +/- 5500' to 90 degrees at +/- 5900' TVD. Drill horizontally to bottom hole location. Run 5 ½" Casing to TD and cement in place.

2. Estimated tops of geological markers:

Queen	900'
San andres	1460'
Tubb	4200'
Abo	5020'
Wolfcamp	5850'

3. Hole Size & Casing Program

	Hole size	Interval	OD of Casing	Weight	Thread	Collar	Grade
WITNESS	17-1/2"	0' – +/-400'	13-3/8"	48#	8rd	STC	H40
WITNESS	12 1/4"	+/-400' – +/-1500'	9-5/8"	40#	8rd	STC	J-55
	7-7/8"	+/-1500' – 9950'	5-1/2"	17#	8rd	LTC	N-80

4. Proposed Mud Circulating System

Interval	Mud Wt.	Visc.	FL	Type Mud System
0'- 400'	8.4-9.2	28-35	NC	Fresh water native mud w/ paper for seepage and sweeps. Lime for PH
400'- 1500'	9.0- 9.2	28-35	NC	Cut brine mud, lime for PH and paper for seepage and sweeps.
1500' – 5000'	8.7 – 8.8	NC	NC	Drill section with Cut Brine circulating the reserve utilizing periodic sweeps of paper as needed for seepage control and solids removal.
5000' – 9950'	8.8-9.0	32-40	25cc	Drill section with Cut Brine. Increase vis w/ salt gel and drop fluid loss with starch. Paper for sweeps. Circulate steel pits

5. Pressure Control Equipment::

After setting 13 3/8" casing and installing 3000# casing spool, NU annular BOP. Test annular BOP, manifold and casing to 1250 psig w/ rig pump

After setting 9 5/8" casing and installing 3000# casing spool, NU 3000# double ram BOP and 3000# annular BOP. Test double ram BOP and manifold to 3000# and annular to 1500# using an independent tester.

6.Logging program

Compensated Neutron: TD of +/- 6000' TVD to surface
Litho-Density: TD of +/- 6000' TVD to +/- 1500'
Laterolog: TD of +/- 6000' TVD to +/- 1500'

No logs in Horizontal section

7. Cementing

13 3/8"	surface	+/- 400'	Set +/- 400' of 13 3/8" 48# STC casing. Cement w/ 200 sx 35:65 Poz:C + additives followed by 200 sx + 2% CaCl2. Circ. cement
9 5/8"	Intermediate	+/- 1500'	Set +/- 1500' of 9 5/8" 40# J-55 STC casing. Cement w/ 500 sx Class "C" light cement + additives followed by 200 sx class "C" + 2% CaCl2. Circ. cement
5 ½"	Production	+/- 9960'	Set +/- 9960' of 5 ½" 17# N-80/J-55 casing. Cement w/ 500 sx Class "H" + additives. Est TOC @ +/- 5500'

EXHIBIT "A"

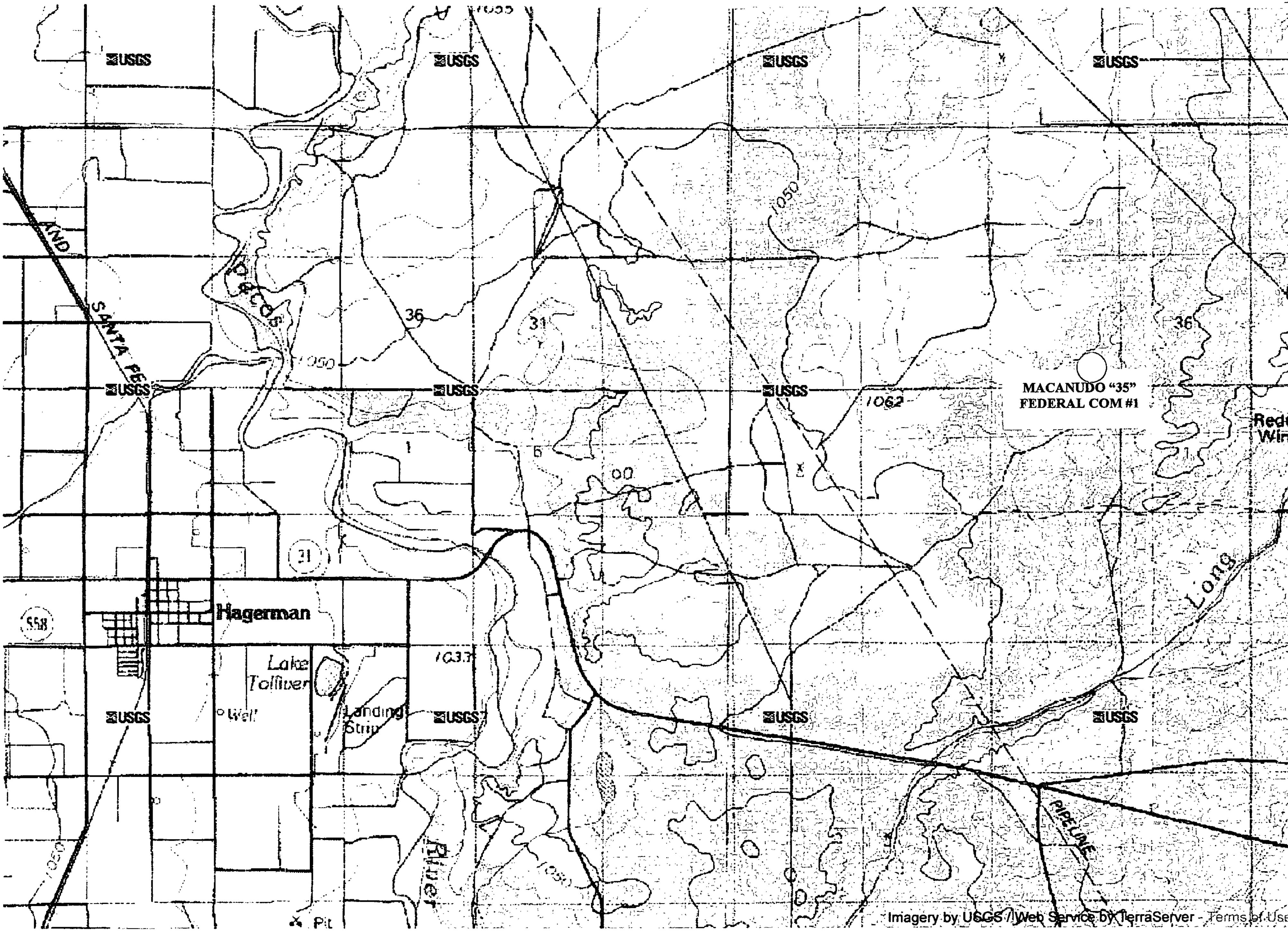
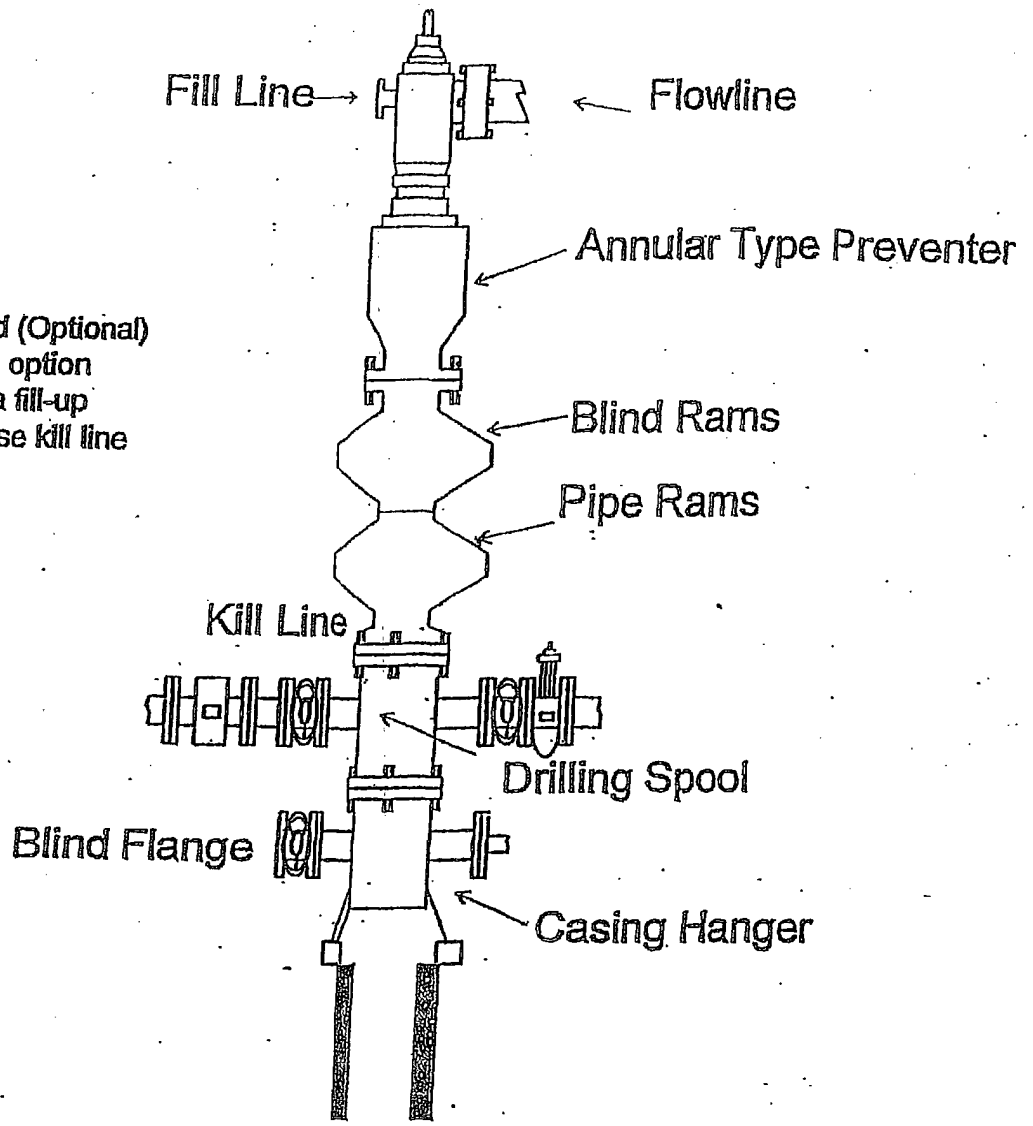

MACANUDO "35"
FEDERAL COM #1
Hagerman
Lake
Tolliver
Landing
Strip
Well
Pit
River
Pecos
SANTA FE
AND
PIPELINE
Long
1050
1062
36
31
Imagery by USGS / Web Service by TerraServer - Terms of Use

EXHIBIT "F"
BOPE SCHEMATIC

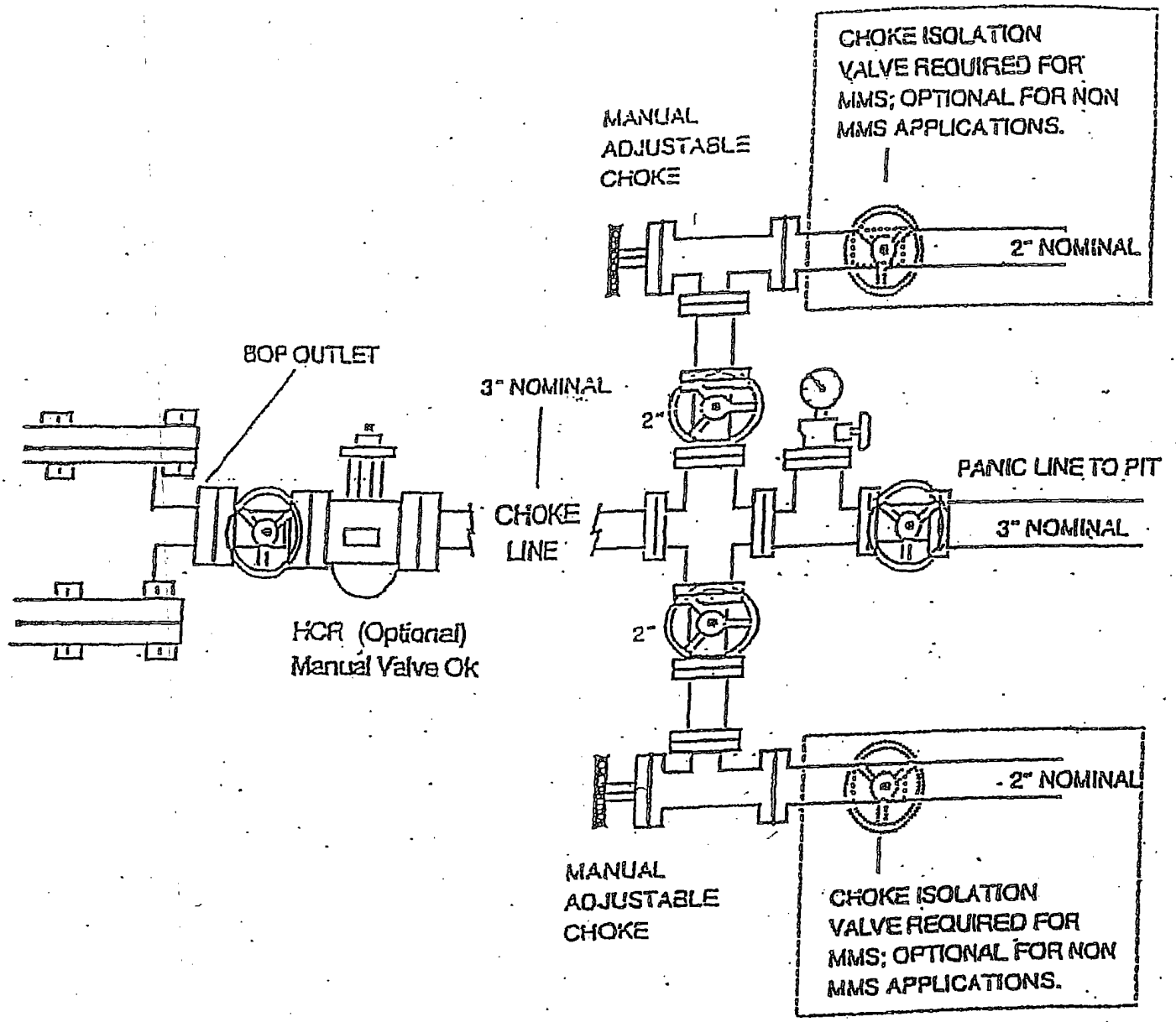


900 SERIES

EXHIBIT "F-1"

CHOKE MANIFOLD

3M SERVICE



COG OPERATING LLC

Macanudo "35" Federal Com #1

Hydrogen Sulfide Drilling
Operations Plan

A. Hydrogen Sulfide Training

All rig crews and company personnel will receive training from a qualified instructor in the following areas prior to penetrating any hydrogen sulfide bearing formations during drilling operations:

1. The hazards and characteristics of hydrogen sulfide (H2S).
2. The proper use and maintenance of the H2S safety equipment and of personal protective equipment to be utilized at the location such as H2S detection monitors, alarms and warning systems, and breathing equipment. Briefing areas and evacuation procedures will also be discussed and established.
3. Proper rescue techniques and procedures will be discussed and established.

Prior to penetrating any known H2S bearing formation, H2S training will be required at the rig sight for all rig crews and company personnel that have not previously received such training. This instruction will be provided by a qualified instructor with each individual being required to pass a 20 question test regarding H2S safety procedures. All contract personnel employed on an unscheduled basis will be required to have received appropriate H2S training.

This Hydrogen Sulfide Drilling and Operations Plan shall be available at the wellsite during drilling operations.

B. H2S Safety Equipment and Systems

All H2S safety equipment and systems will be installed, tested, and operational when drilling operations reach a depth approximately 500' above any known or probable H2S bearing formation. The safety systems to be utilized during drilling operations are as follows:

1. Well Control Equipment
   (a) Double ram BOP with a properly sized closing unit and pipe rams to accommodate all pipe sizes in use.
   (b) A choke manifold with a minimum of one remote choke.

2. H2S Detection and Monitoring Equipment

   (a) Three (3) H2S detection monitors will be placed in service at the location. One monitor will be placed near the bell nipple on the rig floor, one will be placed at the rig substructure, and one will be at the working mud pits or shale shaker. This monitoring system will have warning lights and audible alarms that will alert personnel when H2S levels reach 10 ppm.

   (b) One (1) Sensidyne Pump with the appropriate detection tubes will also be available to perform spot checks for H2S concentrations in any remote or isolated areas.

3. Protective Equipment for Essential Personnel

   Protective equipment will consist of the following:

   (a) Four (4) – five minute escape packs located at strategic points around the rig.

   (b) Two (2) thirty minute rescue packs to be located at the designated briefing areas.

4. Visual Warning System

   Visual warning system will consist of the following:

   (a) Two wind direction indicators.

   (b) One condition / warning sign which will be posted on the road providing direct access to the location. The sign will contain lettering of sufficient size to be readable at a reasonable distance from the immediate location. The sign will inform the public that a hydrogen sulfide gas environment could be encountered at the location.

5. Mud Program

   The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight and safe drilling practices (for example, keeping the hole filled during trips) will minimize hazards when drilling in H2S bearing formations.

6. Communication

   Cellular telephone communication will be available in company vehicles.

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

BC Operating
731 W. Wadley, Ste. L-200
Midland, Texas 79705

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:	BLM 114344
Legal Description of Land:	Unit O, Section 35, T13S, R27E 660' FSL & 1980' FEL SL Chaves County, NM Unit B, Section 35, T13S, R27E 660' FNL & 1980' FEL BHL Chaves County, NM
Formation(s) (if applicable):	Wolfcamp; (Gas)
Bond Coverage:	$ 50,000 statewide bond of BC Operating, Inc.
BLM Bond File No:	432-564

Date

W.E. (Ellis) Gray Jr.
Gray Surface Specialties
Agent for BC Operating, Inc.

III. WELL SUBSURFACE REQUIREMENTS:

A. GENERAL DRILLING REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:

A. Well spud B. Cementing casing: **13-3/8** inch **9-5/8** inch **5-1/2** inch C. BOP tests

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

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

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

5. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

B. CASING:

1. The **13-3/8** inch surface casing shall be set at **approximately 400 feet** and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is **to be circulated to the surface**.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is **to reach at least 500 feet above the top of the uppermost hydrocarbon productive interval**.

C. PRESSURE CONTROL:

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

NOTE – Operator may test surface casing with rig pumps.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

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

D. DRILLING MUD:

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

- Recording pit level indicator to indicate volume gains and losses.
- Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
- Flow-sensor on the flow-line to warn of abnormal mud returns from the well.

August 2, 2006

Attn: Bryan Arrant
Oil Conservation Division
1301 West Grand Avenue
Artesia, NM 88210

RE: Macanudo 35 Federal Com #1
660' FSL & 1980' FEL
Sec 35, T13S, R27E
Chaves County, New Mexico

Dear Bryan:

As per your request, please find the H2S Contingency Plan for the above referenced well. The nearest occupied dwelling is miles away and certainly over 3000 feet.

If you need anything or have any questions, please let me know. Thank you.

Sincerely,

D. Menoud

Denise Menoud
Regulatory Dept.
Gray Surface Specialties,
Agent for COG Operating, LLC
(432) 685-9158
Dmenoud93@yahoo.com