

*C-22*  
N.M. Oil Cons. DIV-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

Form 3160-3  
(August 1999)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

5. Lease Serial No.

NM-54428

6. If Indian, Allottee or Tribe Name

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

NORTH SQUARE LAKE UNIT

8. Lease Name and Well No.

NORTH SQUARE LAKE UNIT 175

9. API Well No.

30-015-32905

10. Field and Pool, or Exploratory

SQUARE LAKE GB-SA

11. Sec., T., R., M., or Blk. and Survey or Area

Sec. 31, T16S, R31E

12. County or Parish

EDDY

13. State

NM

1a. Type of Work: ☒ DRILL

☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other

☐ Single Zone ☐ Multiple Zone

2. Name of Operator

CBS OPERATING CORPORATION

3a. Address P.O. BOX 2236

MIDLAND, TX 79702

3b. Phone No. (include area code)

915/685-0878

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)

At surface 2630' FSL & 1310' FWL Lot 3

At proposed prod. zone same

14. Distance in miles and direction from nearest town or post office\*

5.4 air miles NE of Loco Hills

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

10'

16. No. of Acres in lease

Approx 6125 ac  
in Unit

17. Spacing Unit dedicated to this well

40 acres

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

900'

19. Proposed Depth

3500'

20. BLM/BIA Bond No. on file

NM B000024

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

3800' GL

22. Approximate date work will start\*

January 1, 2003

23. Estimated duration

Drill & Complete 30 days

24. Attachments

**Kearney Controlled Water Basin**

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

*M. A. Sirgo III*

Name (Printed/Typed)

M. A. SIRGO, III

Date

DEC. 10, 2002

Title

AGENT FOR CBS OPERATING CORP

Approved by (Signature)

/s/ LESLIE A. THEISS

Name (Printed/Typed)

/s/ LESLIE A. THEISS

Date

JUL 08 2003

Title

FIELD MANAGER

Office

CARLSBAD FIELD OFFICE

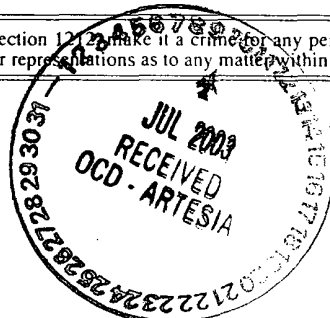
Application approval does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct  
operations thereon.

Conditions of approval, if any, are attached.

**APPROVAL FOR 1 YEAR**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 121 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 reverse)



**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED**

**DISTRICT II**  
P.O. Drawer DD, Artesia, NM 88211-0719

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

**DISTRICT IV**  
**P.O. BOX 2088, SANTA FE, N.M. 87504-2088**

## OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 57570	Pool Name SQUARE LAKE GB-SA
Property Code 30768	Property Name NSLU	Well Number 175
OGRID No. 216852	Operator Name CBS OPERATING CORP	Elevation 3800

### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 3	31	16 S	31 E		2630	SOUTH	1310	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
Dedicated Acres	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>LOT 1</p>   <p>30.82 ACRES LOT 2</p>   <p>30.91 ACRES ← 1310' →</p> <p>SEE DETAIL</p>  <p>30.99 ACRES LOT 4</p>  <p>31.08 ACRES</p>		
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### OPERATOR CERTIFICATION

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

**Signature**

**M. A. SIRGO, III**

**Printed Name**

**AGENT**

**Title**

**DECEMBER 10, 2002**

**Date**

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### SURVEYOR CERTIFICATION

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

MARCH 3, 2000

**Date Surveyed**

**LMP**

**Signature & Seal of Professional Surveyor**

**Certificate No... RONALD J. EIDSON 3239**

**CAREY EIDSON 12641**

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.*

OPERATIONS CORP

RECEIVED  
DEC 27 2002

FORM APPROVED  
OMB No. 1004-0135  
Expires November 30, 2000

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

CBS OPERATING CORPORATION

3a. Address P. O. BOX 2236

MIDLAND TX 79702

3b. Phone No. (include area code)

915/685-0878

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

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

NORTH SQUARE LAKE UNIT

8. Well Name and No.

NORTH SQUARE LAKE UNIT

9. API Well No.

10. Field and Pool, or Exploratory Area  
SQUARE LAKE GB-SA

11. County or Parish, State

EDDY, NEW MEXICO

**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 <u>Master Drilling Plan</u>
	<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 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.)

Attached for your review and approval is a Master Drilling Plan for the North Square Lake Unit. CBS Operating Corporation will conduct all unit drilling operations subject to this Master Drilling Plan.

Any unique data to specific well locations will be presented in each individual well 3160-3 applications on the pertinent information data sheet.

NOTE: Depth of surface casing may vary depending on geology. Check *Conditions of Approval* for surface casing setting depth.

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

M. A. SIRGO, III

Title AGENT

Signature

Date DECEMBER 10, 2002

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Alexis C. Swoboda

Title

PETROLEUM ENGINEER

Date

DEC 10 2002

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



**CBS OPERATING CORPORATION  
DECEMBER 2002  
MASTER DRILLING PROGRAM  
NORTH SQUARE LAKE UNIT  
EDDY COUNTY, NEW MEXICO**

The following items supplement Form 3160-3 in accordance with instructions contained in Onshore Oil & Gas Order No. 1.

1) This Master Drilling Plan is submitted to cover new wells drilled within the North Square Lake Unit boundary as defined below:

County – Eddy

T-16S R30-E  
E/2 Section 25  
N/2 Section 36

T-16S R31-E  
S/2 Section 19  
S/2 Section 20  
NW/4 NW/4 Section 27  
S/2 Section 27  
SW/4 NE/4 Section 27  
SW/4 Section 27  
W/2 SE/4 Section 27  
SE/4 SE/4 Section 27  
All Section 28  
All Section 29  
All Section 30  
All Section 31  
All Section 32  
All Section 33  
All Section 34

2) SURFACE FORMATION: Current

3) ESTIMATED TOPS OF GEOLOGIC MARKERS:

Top of Salt    525'  
Base of Salt   1360'  
Yates         1570'  
Seven Rivers   1590'

Queen         2200'  
Grayburg      2852'  
San Andres    3208'

MASTER DRILLING PLAN  
PAGE 2

4) ESTIMATED DEPTHS TO WATER OIL OR GAS FORMATION:

Water – Possible groundwater from 0' to 75'  
Oil - 2100' to TD  
Gas - None anticipated

No other intervals are expected to give up oil, gas or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 8-5/8" casing at 400' and circulating cement back to surface. Any shallower zones above TD which contain commercial quantities of oil and/or gas will have cement circulated across them by inserting a float shoe joint into the 5-1/2" production casing which will be run at TD.

5) CASING PROGRAM:

<u>HOLE SIZE</u>	<u>INTERVAL</u>	<u>OD CASING</u>	<u>WEIGHT</u>	<u>GRADE</u>	<u>JT.</u>	<u>TYPE</u>
12-1/4"	0-400'	8-5/8"	24#	J-55	LTC	R-3
7-7/8"	0-TD	5-1/2"	15.5#	J-55	LTC	R-3

All strings of casing will be satisfactorily tested to 1000 psi.

CEMENT PROGRAM:

8-5/8" Surface Casing: Cemented to surface with 330 sx of Class C w/2% Calcium Chloride

5-1/2" Production Casing: Cemented with 830 sx Class C. Will attempt to circulate to surface.

6) PRESSURE CONTROL EQUIPMENT:

Install a 3000# 10" Shaffer double hydraulic BOP on the 8-5/8" casing prior to drilling into the Queen. Due to depleted nature of the reservoir, it is requested that a waiver be granted to test pressure control equipment to 1000 psi, using rig pump instead of the normal 2000 psi test. Exhibit D is a diagrammatic sketch of the BOP equipment.

7) CIRCULATING MEDIUM:

Drill with fresh water from surface to setting depth of surface casing. Drill remainder of hole with brine water, using additives to control water loss, viscosity and mud weight.

MASTER DRILLING PLAN  
PAGE 3

8) AUXILIARY EQUIPMENT:

Equipment will include a gas detector, pit level monitor and a full-opening safety valve.

9) TESTING, LOGGING AND CORING PROGRAM:

Samples: Samples will be caught at 10' intervals from below the surface casing to total depth.

DST and Cores: None anticipated

Logging: Density-Neutron Log, Gamma Ray-Neutron Log

10) ABNORMAL PRESSURES, TEMPERATURES OR HYDROGEN SULFIDE:

No abnormal pressure or temperatures anticipated. Precautions will be taken to monitor possible traces of hydrogen sulfide gas in the Grayburg. See H2S plan attachment.

11) ANTICIPATED STARTING DATE:

Drilling will commence upon Federal and State approval. Drilling and completion will require about 30 days.

## CBS OPERATING CORP.

### ATTACHMENT

#### HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

##### I. Hydrogen Sulfide Training

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

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

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

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

There will be an initial training session just prior to encountering a known or probably H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

##### II. H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H<sub>2</sub>S.

1. Well Control Equipment:
  - A. Flare line with electronic igniter or continuous pilot.
  - B. Choke manifold with a minimum of one remote choke.
  - C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
  - D. Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head, and flare gun with flares.
2. Protective Equipment for Essential Personnel:
  - A. Mark II Surviveair 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.
3. H2S Detection and Monitoring Equipment:
  - A. Two portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.
  - B. One portable SO2 monitor positioned near flare line.
4. Visual Warning Systems:
  - A. Wind direction indicators as shown on well site diagram.
  - B. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.
5. Mud Program:
  - A. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.
  - B. A mud-gas separator and an H2S gas buster will be utilized.
6. Metallurgy:
  - A. All drill strings, casings, tubing, wellhead, blowout preventors, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
  - B. All elastomers used for packing and seals shall be H2S trim.

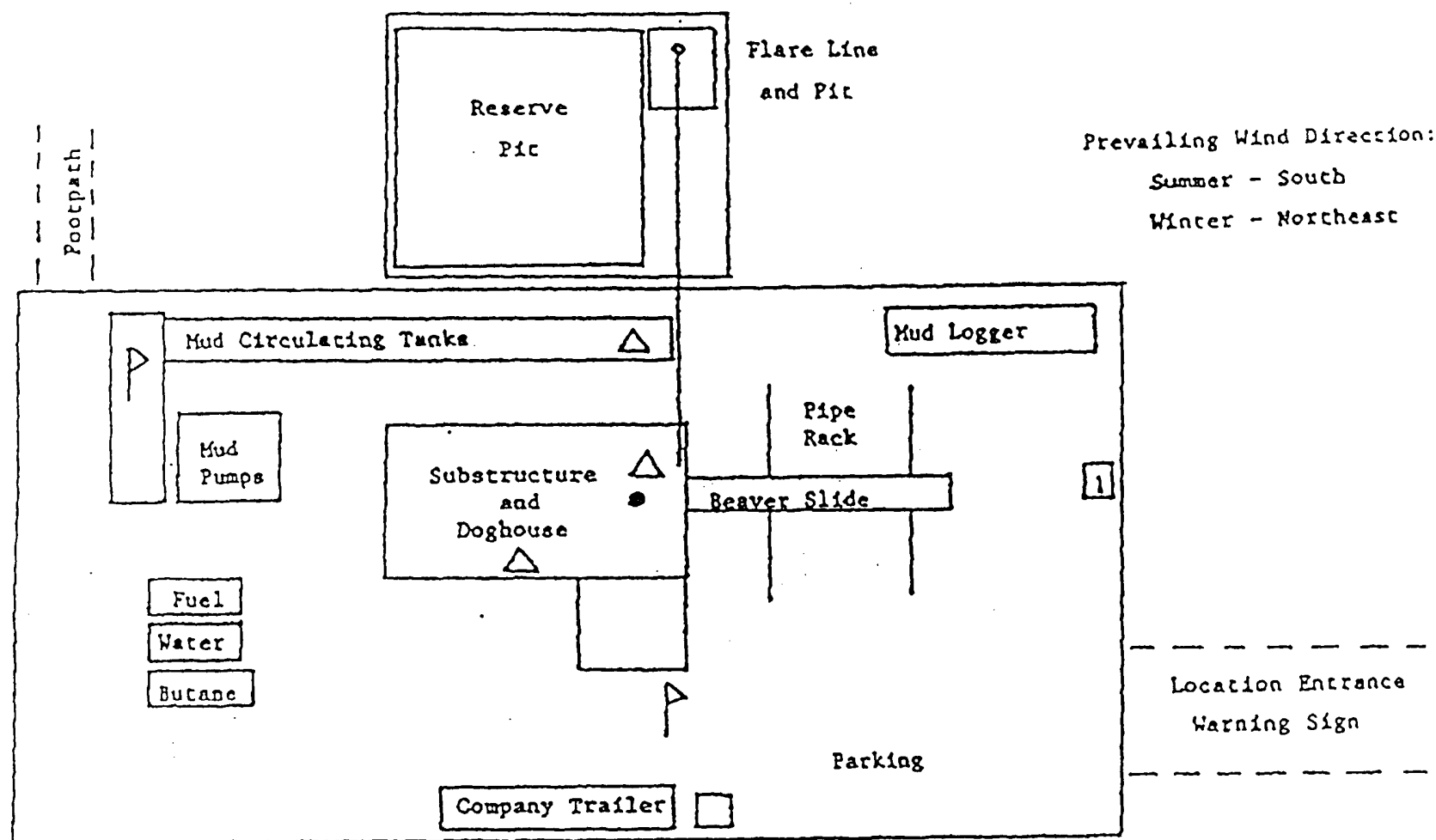


7. Communication:

- A. Radio communications in company vehicles including cellular telephone and two-way radio.
- B. Land line (telephone) communications at field office.

8. Well Testing:

- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill stem testing operations conducted in an H<sub>2</sub>S environment will use the closed chamber method of testing.



- △ - H<sub>2</sub>S Monitors with alarms at the bell nipple and shale shaker
- P - Wind Direction Indicators
- - Safe Briefing areas with caution signs and protective breathing equipment  
Min. 150 feet from wellhead. 1 designates primary area

# WARNING

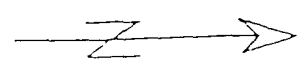
YOU ARE ENTERING AN H<sub>2</sub>S AREA  
AUTHORIZED PERSONNEL ONLY

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

*CBS Operating Corp.*

*1-915-685-0878*







**Attachment to Exhibit D**  
**NOTES REGARDING THE BLOWOUT PREVENTERS**

1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum I.D. equal to preventer bore.
2. Wear ring to be properly installed in head.
3. Blow out preventer and all fittings must be in good condition, 3000 psi W.P. minimum.
4. All fittings to be flanged.
5. Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 3000 psi W.P. minimum.
6. All choke and fill lines to be securely anchored, especially ends of choke lines.
7. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
8. Kelly cock on kelly.
9. Extension wrenches and hand wheels to be properly installed.
10. Blow out preventer control to be located as close to driller's position as feasible.
11. Blow out preventer closing equipment to include minimum 40 gallon accumulator, two independent sources of pump power on each closing unit installation, and meet all API specifications.

***CBS OPERATING CORP.***

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**P. O. BOX 2236, MIDLAND, TX 79702 432/685-0878 FAX 685-1945**

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July 28, 2003

VIA FAX 505/748-9720

NM OIL CONSERVATION DIVISION  
Energy, Minerals & Natural Resource Dept.  
1301 W. Grand Ave.  
Artesia, New Mexico 88210

Attention: Mr. Bryan Arrant

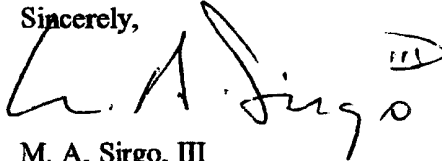
Re: Hydrogen Sulfide Contingency Plan  
North Square Lake Unit  
Eddy County, NM

Dear Mr. Arrant:

Reference is made to that certain Master Drilling Plan filed by CBS Operating Corp. for the North Square Lake Unit. This plan was approved by the BLM on December 23, 2002.

This Master Drilling Plan contains a Hydrogen Sulfide Drilling Operations Plan. CBS currently feels that this plan is comprehensive with regard to H<sub>2</sub>S safety and that expected H<sub>2</sub>S levels in the field do not warrant an additional contingency plan at this time.

Sincerely,

A handwritten signature in black ink, appearing to read "M. A. Sirgo, III". The signature is stylized with a large, sweeping "M" and a distinct "III" at the end.

M. A. Sirgo, III

MAS/pr