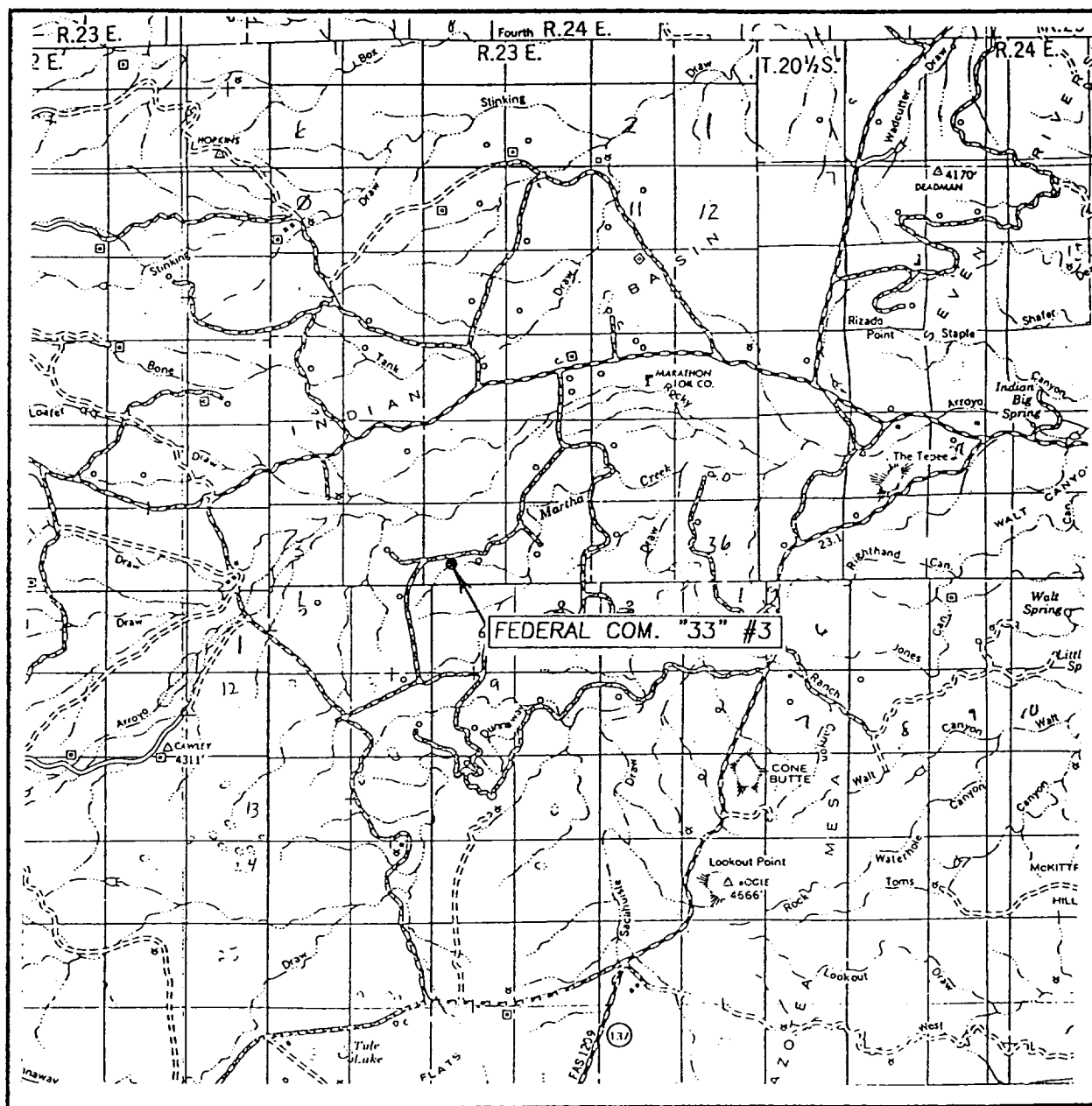


# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 33 TWP. 21-S RGE. 23-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1880' FSL & 1980' FWL

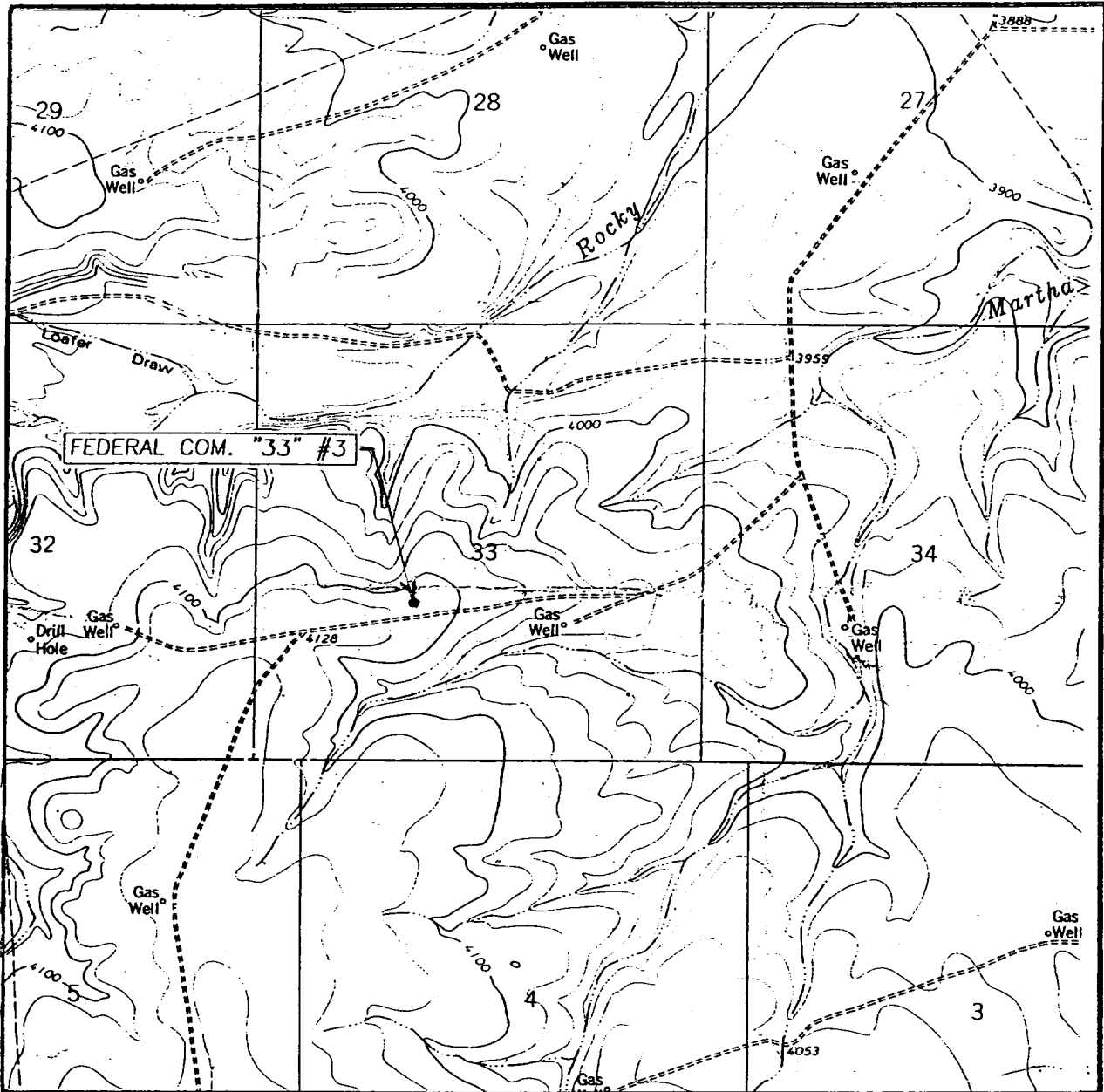
ELEVATION 4108'

OPERATOR CHEVRON U.S.A. PRODUCTION COMPANY

LEASE FEDERAL "33"

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 20'

MARTHA CREEK, N.M.

SEC. 33 TWP. 21-S RGE. 23-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1880' FSL & 1980' FWL

ELEVATION 4108'

OPERATOR CHEVRON U.S.A. PRODUCTION COMPANY

LEASE FEDERAL "33"

U.S.G.S. TOPOGRAPHIC MAP

MARTHA CREEK, N.KM.

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117

## DRILLING PROGRAM

Attachment to Form 3160-3  
Chevron U.S.A. Inc.  
Federal 33 Gas Com #3  
1880' FSL & 1980' FWL  
Section 33, T21S, R23E  
Eddy County, New Mexico

**Elevation of unprepared ground:** 4108'

**Geologic Name of Surface Formation:** Quaternary-Alluvium

**Type Drilling Tools:** Rotary

**Proposed Drilling Depth:** 7900'

**Estimated Top of Geologic Markers:**

San Andres	425'
Glorieta	1950'
Bone Spring	3425'
Wolfcamp	6050'
Cisco	7015'

**Estimated Depths at which target Formations expected:**

Cisco	7015'
-------	-------

**Casing Program and Setting Depths:**

Hole Size	Casing Size	Weight	Grade	Setting Depth
12-1/4"	9-5/8"	36#	K-55	1,500'
8-3/4"	7"	23 & 26#	K-55	7,900'

**Casing Setting Depths and Cementing Program:**

**Casing Setting Depths and Cementing Program:**

- A. Surface casing will be cemented to surface using Class "C" cement. Exact volumes and additives will be based on severity of lost returns historically experienced in this area. Top jobs will be performed as necessary to bring cement to surface.
- B. Production casing will be cemented with Class "H" cement to cover any hydrocarbon bearing zones by a minimum of 500'. If cement is not circulated, a temperature survey will be run to determine cement top.

Prior to drilling below surface casing, a BOP hook-up for 3,000 psi will be installed. All BOP equipment will be tested as per Onshore Oil & Gas Order 2 – A. Well Control Requirements.

**Circulating Media:**

0-1500'	Air/Air Mist
1500-7,900'	FW Aphron System 7.5-8.2 ppg

**Testing, Logging and Coring Program:**

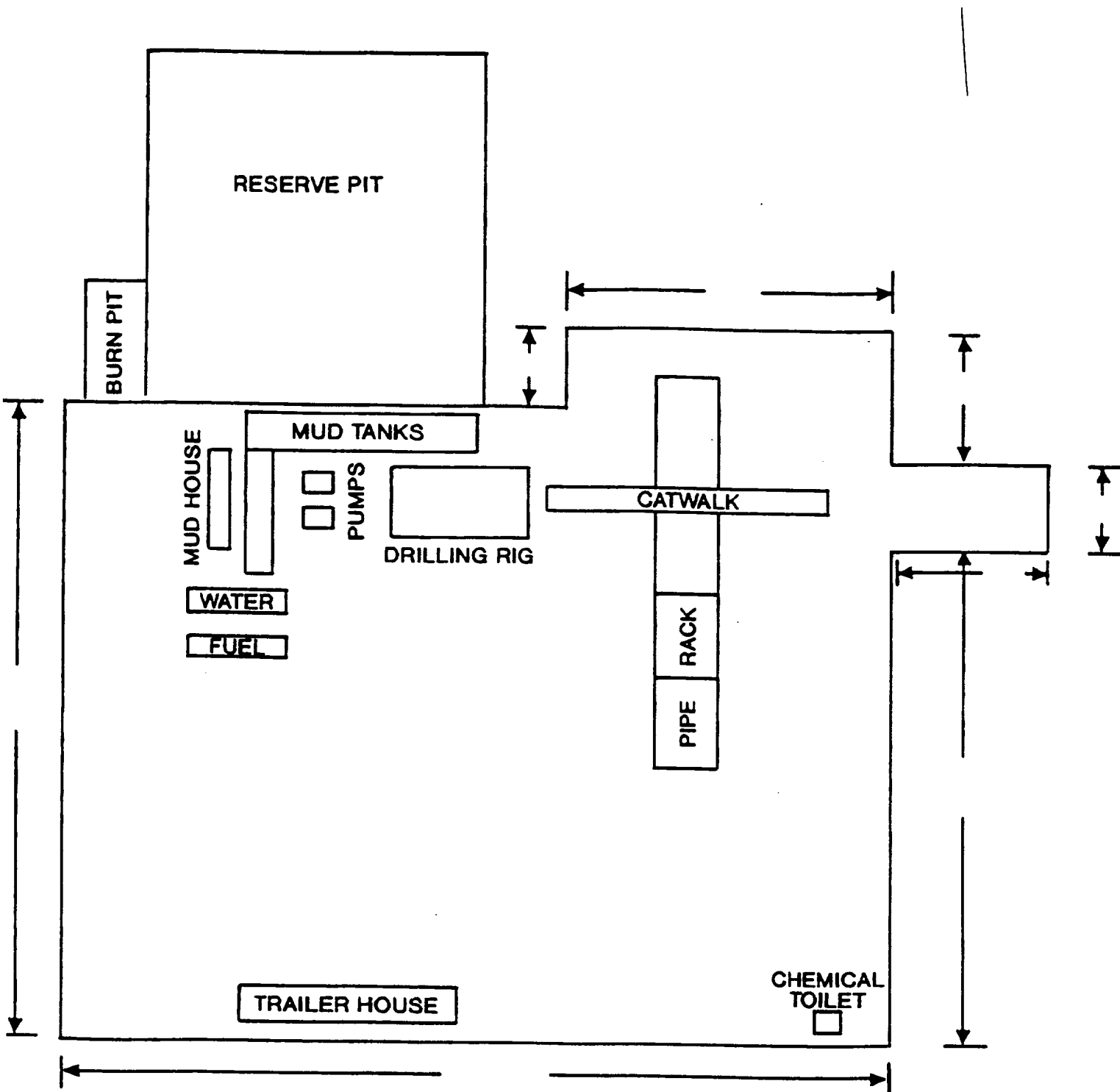
- A. Open hole logs will be run at total depth.
- B. No coring is planned.

**Abnormal Pressure or Temperature and Hydrogen Sulfide Gas:**

No abnormal pressure or temperature is anticipated. H<sub>2</sub>S may be encountered (6000-8000 ppm).

**Anticipated Starting Date:**

Drilling operations should begin upon approval of this permit and will take approximately four weeks. Completion operations will begin soon after drilling is completed and will take approximately two weeks.



**CHEVRON USA INC.**  
**EXHIBIT "C"**

**Well Name & Number:** Federal 33 Gas Com #8

**Location:** 1880' S.L. & 980' F.W.L.

**Section:** 33 **Unit:** K

**Township:** 21S **Range:** 23E

Eddy **County, New Mexico**

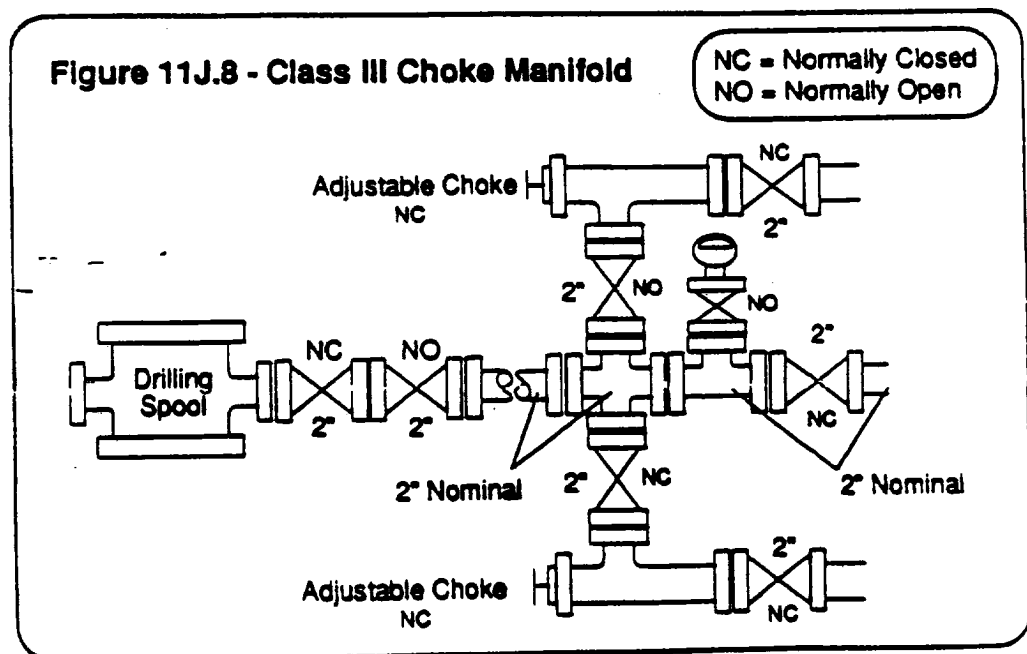
**PREPARED BY:**

CHEVRON L LING REFERENCE SERIES  
VOLUME ELEVEN  
WELL CONTROL AND BLOWOUT PREVENTION

D. CLASS III CHOKE MANIFOLD

The Class III choke manifold is suitable for Class III workovers and drilling operations. The Standard Class III choke manifold is shown in Figure 11J.8 below. Specific design features of the Class III manifold include:

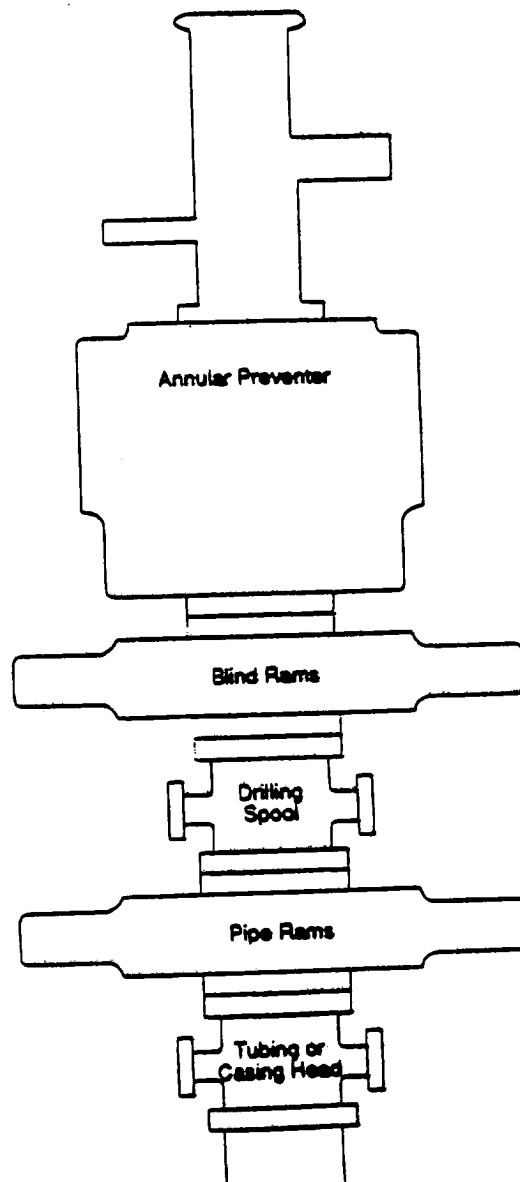
1. The manifold is attached to a drilling spool or the top ram preventer side outlet.
2. The minimum internal diameter is 2" (nominal) for outlets, flanges, valves and lines.
3. Includes two steel gate valves in the choke line at the drilling spool outlet. The inside choke line valve may be remotely controlled (HCR).
4. Includes two manually adjustable chokes which are installed on both side of the manifold cross. Steel isolation gate valves are installed between both chokes and the cross, and also downstream of both chokes.
5. Includes a bleed line which runs straight through the cross and is isolated by a steel gate valve.
6. Includes a valve isolated pressure gauge suitable for drilling service which can display the casing pressure within view of the choke operator.
7. Returns through the choke manifold must be divertible through a mud-gas separator and then be routed to either the shale shaker or the reserve pit through a buffer tank or manifold arrangement.
8. If the choke manifold is remote from the wellhead, a third master valve should be installed immediately upstream of the manifold cross.



**E. CLASS III BLOWOUT PREVENTER STACK:**

The Class III preventer stack is designed for drilling or workover operations. It is composed of a single hydraulically operated annular preventer on top, then a blind ram preventer, a drilling spool, and a single pipe ram preventer on bottom. The choke and kill lines are installed onto the drilling spool and must have a minimum internal diameter of 2". All side outlets on the preventers or drilling spool must be flanged, studded, or clamped. An emergency kill line may be installed on the wellhead. A double ram preventer should only be used when space limitations make it necessary to remove the drilling spool. In these instances, the choke manifold should be connected to a flanged outlet between the preventer rams only. In this hookup, the pipe rams are considered master rams only, and cannot be used to routinely circulate out a kick. The Class III blowout preventer stack is shown to the right in Figure 11J.4.

**Figure 11J.4**  
**Class III Blowout Preventer Stack**



## H2S DRILLING OPERATIONS PLAN

### I. HYDROGEN SULFIDE TRAINING

All contractors and subcontractors employed by Chevron U.S.A. Inc. will receive or have received training from a qualified instructor within the last twelve months 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. Safety precautions
3. Operations of safety equipment and life support systems

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

1. The effect of H<sub>2</sub>S on metal components in the system. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-down procedures when drilling or working a well, blowout prevention and well control procedures, if the nature of work performed involves these items.
3. The contents and requirements of the contingency plan when such plan is required.

All personnel will be required to carry documentation of the above training on their person.

### II. H2S EQUIPMENT AND SYSTEMS

#### 1. Safety Equipment

The following safety equipment will be on location.

- A. Wind direction indicators as seen in attached diagram.
- B. Automatic H<sub>2</sub>S detection alarm equipment (both audio and visual).
- C. Clearly visible warning signs as seen on the attached diagram. Signs will use the words "POISON GAS" and "CAUTION" with a strong color contrast.
- D. Protective breathing equipment will be located in the dog house and at the briefing areas as seen in the attached diagram.



## 2. Well Control Systems

### A. Blowout Prevention Equipment

Equipment includes but is not limited to:

- a. pipe rams to accommodate all pipe sizes
- b. blind rams
- c. choke manifold
- d. closing unit

Auxiliary equipment added as appropriate includes:

- a. annular preventor
- b. rotating head
- c. mud-gas separator
- d. flare line and means of ignition
- e. remote operated choke

NA / es

NA / es

NA / es

NA

NA

### B. Communication

The rig contractor will be required to have a two-way communication capability. Chevron U.S.A. Inc. will have either land-line or mobile telephone capabilities.

### C. Mud Program

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. Proper mud weight, safe drilling practices, and the use of H<sub>2</sub>S scavengers when appropriate will minimize hazards when penetrating H<sub>2</sub>S bearing formations.

### D. No Drill Stem Tests are planned.

## III. WELL SITE DIAGRAM

A complete well site diagram including the following information is attached.

- 1. Rig orientation
- 2. Briefing areas
- 3. Ingress and egress
- 4. Pits and flare lines
- 5. Caution and danger signs
- 6. Wind indicators and prevailing wind direction

## **SURFACE USE AND OPERATING PLAN**

Attachment to Form 3160-3  
Chevron U.S.A. Inc.  
Federal 33 Gas Com #3  
1880' FSL & 1980' FWL  
Section 33, T21S, R23E  
Eddy County, New Mexico

1. **Existing Roads:**

- A. The well site and elevation plat for the proposed Federal Com 33 #3 are attached. It was staked by Ronald J. Eidson of Hobbs, New Mexico on August 6, 2001.
- B. Directions to location: Travel from Carlsbad, New Mexico west on Highway 285 for approximately 12 miles; turn south onto Highway 137 and travel approximately 11 miles; turn west on Marathon Road 401 past Marathon Gas Plant to first road on south side; turn left and travel approximately 1 mile to road on left, travelling 1.5 miles, turn right (south) travelling approximately 2 miles, turn right (west) go 1/2 mile to well.

2. **Proposed access Road:**

Existing road will be utilized.

3. **Location of Existing and/or Proposed facilities:**

Facilities will be placed on the drill pad. A sundry notice will be sent to the BLM upon results of the completion.

To protect livestock and wildlife, the reserve pit will be fenced.

Upon completion of drilling, the location and surrounding area will be cleared of all debris. All trash will be disposed of in the trash bin.

4. **Location and Type of Water Supply:**

Water for drilling and completion operations will be purchased from a supplier and transported to the well site by truck.

5. Source of Construction Materials:

All caliche required will be obtained from an existing BLM approved pit. All roads and pads will be constructed of 6" rolled and compacted caliche.

6. Methods of Handling Water Disposal:

- A. The drill cuttings, fluids, and completion fluids will be placed in the reserve pit. The reserve pit will be fenced on three sides away from the pad during drilling and the fourth side as soon as the rig moves out. The reserve pit will be allowed to dry. Reserve pit contents will be pushed into adjacent caliche pit and covered with location top soil.
- B. All garbage and trash will be placed in a trash container to be hauled off location.
- C. Chemical toilets will be provided and maintained during drilling operations

7. Ancillary Facilities:

No campsite or other facilities will be constructed as a result of this well.

8. Well Site Layout:

- A. The drill pad is shown on Attachment. Approximate dimensions of the pad, the pits and the general location of the rig equipment are displayed. Top soil will be stored adjacent to the pad until reclamation efforts are undertaken. Only modest cuts will be necessary to build the pad which will be covered with 6" of compacted caliche.
- B. No permanent living facilities are planned, but temporary trailers for the tool pusher, drilling foreman and mud logger may be on location throughout drilling operations.
- C. The reserve pit will be lined using plastic sheeting of 6 mil thickness.

9. Plans for Restoration of Surface:

- A. If well is abandoned, the location and access road will be cleaned and restored to the original topographical contours as much as possible. The area will be reseeded with the appropriate seed mixture.
- B. If the well is productive, areas not used in production will be contoured and seeded with stipulated seed mixture. Production equipment will be painted the color designated by the Bureau of Land Management.

10. Surface Ownership:

The Well site is owned by the Bureau of Land Management.

11. Refer to archaeological report performed by Archaeological Survey Consultants (No. 01-124) for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.

12. Lessee's or Operator's Representative:

George Tullos

Chevron U.S.A. Inc.  
P.O. Box 1150  
Midland, Texas 79702

Phone: (915)687-7463

Certification:

I hereby certify that I, or a Chevron representative, have inspected the proposed drill site and access road; 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 Chevron U.S.A. Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Date: 10/4/01

Signed: J. K. Ripley  
J. K. Ripley  
Regulatory O.A.

Attachments