

# APPLICATION FOR DRILLING

J. F. HERBIG OIL  
Conoco Federal, Well No. 1  
1980' FSL & 330' FWL, Sec. 29-T20S-R39E  
Lea County, New Mexico  
Lease No.: NM-079540  
(Development Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, J. F. Herbig Oil submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Rustler	1610'	Blinebery	6095'
Yates	2900'	Tubb	6623'
Grayburg	3910'	Lower Clearfork	6693'
San Andres	4317'	Drinkard Porosity	6928'
Glorieta	5620'	Abo	7123'
		T.D.	7500'

3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water between 100' - 350'.

Oil: Possible in the San Andres, Blinebery, Drinkard and Abo formations.

Gas: Possible in the Yates.

4. Proposed Casing Program: See Form 3160-3.
5. Proposed Control Equipment: See Form 3160-3 and Exhibit "E".
6. Mud Program: See Form 3160-3.
7. Auxiliary Equipment: Blowout Preventer, gas detector, Kelly cock, pit level monitor, flow sensors and stabbing valve.
8. Testing, Logging, and Coring Program:

Drill Stem Tests: Possible in the Strawn and Wolfcamp.

Logging: Gamma Ray:

CNL-LDT, DLL-MFL

Coring: None planned.

Surf. Csg. to T.D.

Below 8 5/8" to T.D.

9. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated BHP = 3200 psi (Exc. Hole), Temp. = 118°.
- 9a. H<sub>2</sub>S: None expected, based on wells drilled in the area.
10. Anticipated starting date: September 1, 1994.  
Anticipated completion of drilling operations: Approximately 3 weeks.

**EXHIBIT "F"**

**J. F. HERBIG OIL**

**H<sub>2</sub>S DRILLING OPERATIONS PLAN**

**For:**

**Conoco Federal. Well No. 1**

**1980' FSL & 330' FWL, Sec. 29-T20S-R39E**

**I. HYDROGEN SULFIDE TRAINING**

All key personnel whether regularly assigned, contracted or employed on an unscheduled basis will receive or represent that they have received training in accordance with the general training requirements outlined in the API RP49 for safe drilling of wells containing hydrogen sulfide, Section 2.

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

1. The corrective action and shut-in procedures when drilling or reworking a well, and blowout prevention in well control procedures.
2. The contents and requirements of the H<sub>2</sub>S drilling operations plan.

**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' above the first zone containing or reasonably expected to contain 100 ppm or more hydrogen sulfide.

1. Well Control Equipment:
  - a. Flare line with a continuous pilot.
  - b. Choke manifold with a minimum of one choke.
  - c. Blind rams and pipe rams to accommodate all drill pipe sizes with a properly sized closing unit.
  - d. Auxiliary equipment to include and annular preventer and a rotating head.
2. Protective Equipment:
  - a. Proper protective breathing apparatus shall be readily accessible to all essential personnel on the drill site
3. H<sub>2</sub>S and Monitoring Equipment:
  - a. Three portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens.
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.

5. Mud Program:

- a. The mud program has been designed to minimize the volume of  $H_2S$  circulated to the surface. Proper mud weight and safe drilling practices will minimize hazards when penetrating  $H_2S$  bearing zones.

6. Communications:

- a. Radio communications are available in company vehicles and at the rig site.
- b. Land line "telephone" communications at field office.

7. Well Testing:

- a. Drillstem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. When drillstem testing intervals known to or reasonably expected to contain 100 ppm or more  $H_2S$ , the drillstem test will be conducted during daylight hours and formation fluids will not be flowed to the surface.

RIG # 1

BLOWOUT PREVENTOR ARRANGEMENT

10" SHAFFER TYPE "E", 3000 psi WP

80 GALLON, 4 STATION KOOMEY ACCUMULATOR

3000 psi WP CHOKE MANIFOLD

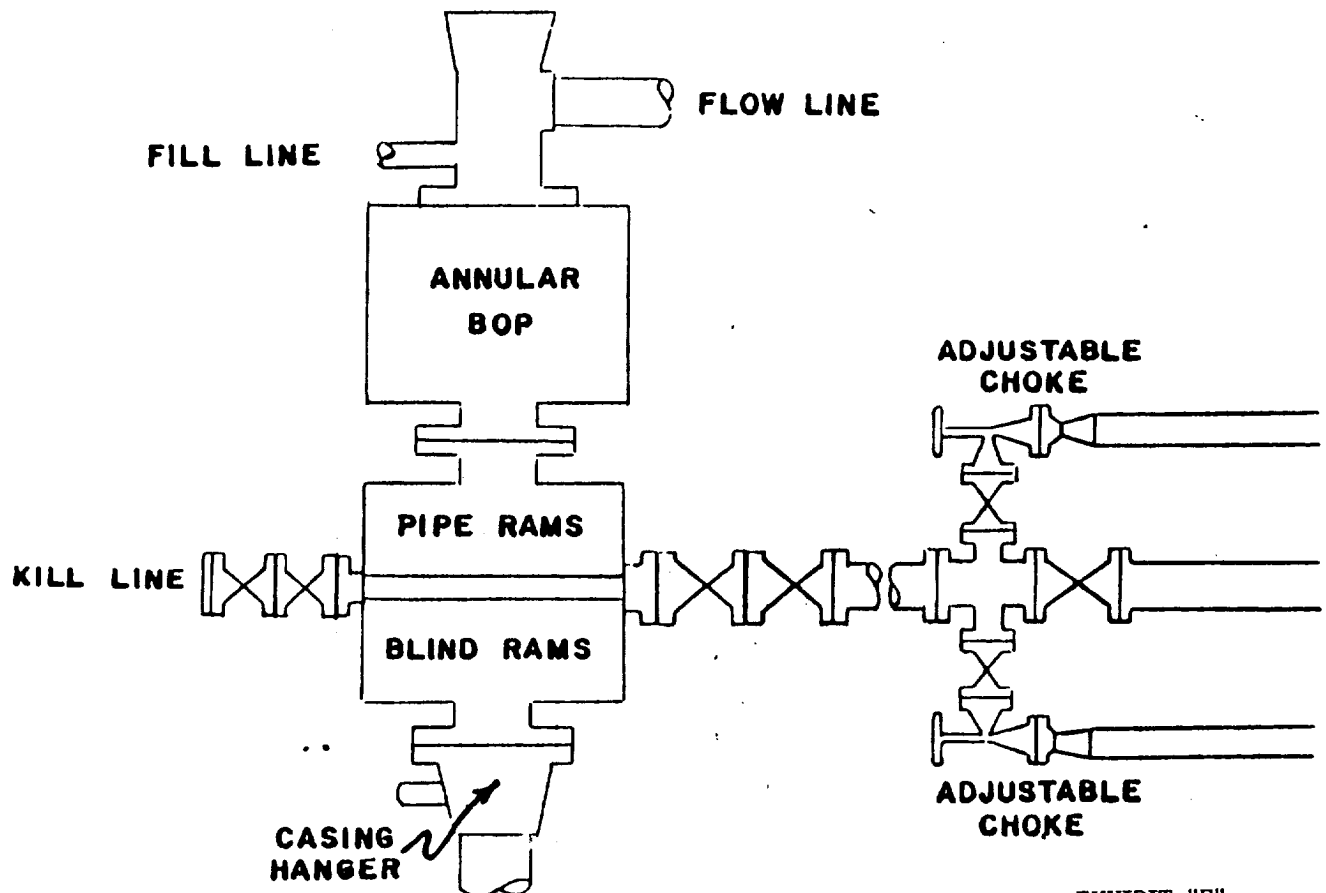


EXHIBIT "E"  
J. F. HERBIG OIL  
Conoco Federal, Well No. 1  
BOP Specifications