## LYNX PETROLEUM CONSULTANTS, INC. H<sub>2</sub>S PRECAUTIONS

#### 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 operations on this well:

- 1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S).
- 2. The proper use and maintenance of personal 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.

### II. H2S SAFETY EQUIPMENT AND SYSTEMS

- 1. Well Control Equipment:
  - A. A 5000 psig WP Blowout preventer with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit will be furnished.
- 2. H<sub>2</sub>S detection and monitoring equipment:
  - A. 2 portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H<sub>2</sub>S levels of 20 ppm are reached.
- 3. Visual warning systems:

# LYNX PETROLEUM CONSULTANTS, H<sub>2</sub>S PRECAUTIONS Page 2

A. A wind direction indicator will be in place on the pulling unit doghouse.

## 4. Mud program:

A. The working fluid for this recompletion will be 2% KCL treated fresh water.

## 5. Metallurgy:

- A. Tubing, wellhead, and blowout preventers shall be suitable for H<sub>2</sub>S service.
- B. All elastomers used for packing and seals shall be H<sub>2</sub>S trim.

#### 6. Communication:

A. Communications in company vehicles are provided by cellular telephones.

Cell1: 575-390-9063 Cell2: 575-390-9065

- B. Land line (telephone) communications at Hobbs office. Phone: 575-392-6950
- C: Emergency Numbers

911

Carlsbad Sheriff's Dept.: 575-887-1888

Carlsbad Hospital: 575-887-4100 Carlsbad Fire Dept.: 575-885-3125 Maljamar Fire Dept.: 575-676-4100 Lea County Sheriff's Dept: 575-396-3611

Hobbs Hospital: 575-492-5000

New Mexico State Police: 575-392-5588

## 8. Well testing:

A. No drill stem tests are being contemplated during this operation.