

**Hydrogen Sulfide Drilling Operations Plan****Mewbourne Oil Company**

Winchester "36" State #1

1880' FSL &amp; 1980' FWL

Section 36 - T19S - R28E

Eddy County, New Mexico

API# 30-015-32845

**1. Hydrogen Sulfide Training**

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

- A. The hazards and characteristics of hydrogen sulfide gas.
- B. The proper use of personal protective equipment and life support systems.
- C. The proper use of hydrogen sulfide detectors, alarms, warning systems, briefing areas, evacuation procedures.
- D. The proper techniques for first aid and rescue operations.

Additionally, supervisory personnel will be trained in the following areas:

- A. The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.
- B. Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.
- C. The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a known hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

**2. Hydrogen Sulfide Safety Equipment and Systems**


All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the intermediate casing.

**A. Well Control Equipment**

- 1. Flare line with automatic igniter or continuous ignition source.
- 2. Choke manifold with minimum of one adjustable choke.
- 3. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- 4. Auxiliary equipment including rotating head and annular type blowout preventer.

- B. Protective Equipment for Essential Personnel  
Thirty minute self contained work unit located at briefing area as indicated on well site diagram.
- C. Hydrogen Sulfide Protection and Monitoring Equipment  
Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 ppm.
- D. Visual Warning Systems
1. Wind direction indicators as indicated on the well site diagram.
  2. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.
3. **Mud Program**  
The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.
4. **Metallurgy**  
All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.
5. **Communications**  
Communications in company vehicles and tool pushers are either two way radios or cellular phones.
6. **Well Testing**  
Drill stem testing is not an anticipated requirement for evaluation of this well. A drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

Upon review of past drilling in this area, no appreciable amounts of H<sub>2</sub>S should be encountered while drilling this well. This plan will be kept in place while drilling, however, to increase the overall safety for the personnel on site.

  
F.C. Lathan  
Drilling Foreman