

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

Fasken Oil and Ranch, Ltd.  
Baetz "23" Federal No. 4H  
SHL: 156' FNL & 681' FEL  
Sec. 26, T20S, R32E  
BHL: 1864' FSL & 2316' FEL  
Sec. 22, T20S, R32E  
Lea County, New Mexico

### 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 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 of first aid and rescue procedures.

In addition the 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.

There will be an initial training session just prior to encountering a known or probable 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. 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 penetration the first zone containing or reasonable expected to contain H<sub>2</sub>S.

#### 1. Well Control Equipment:

- A. Flare line.

- B. Choke manifold with remotely operated 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 (if necessary) and rotating head.
2. Protective equipment for essential personnel:
- A. 5-minute escape units located in the dog house and 30-minute air units at briefing areas, as indicated on well site diagram.
3. H2S detection and monitoring equipment:
- A. 3 - 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. 1 - portable SO2 monitor positioned near flare line during H2S flaring operations.
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 a readable distance from the immediate location.
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 when necessary will minimize hazards when penetrating H2S bearing zones.
6. Metallurgy:
- A. All drill strings, casings, tubing, wellhead, blowout preventors, drilling spools kill lines, choke manifold and lines valves shall be suitable for H2S service.
  - B. All elastomers used for packing and seals shall be H2S trimmed.
7. Communications:
- A. Radio communications will be available in company vehicles and rig dog house.
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 of any known formation that contains H2S will be conducted during daylight hours.

**Fasken Oil and Ranch, Ltd.**  
**H<sub>2</sub>S Contingency Plan**  
**Emergency Phone Numbers**

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Lea County, New Mexico

**Fasken Oil and Ranch, Ltd.**

432-687-1777

**Key Personnel**

Tommy Taylor, Director of Oil and Gas Development  
Cory Frederick, Senior Drilling Engineer  
Lane Gilmore, Drilling Engineer  
Deryl Briles, Drilling Foreman  
Jimmy Davis, Director of Operations

432-556-2228  
432-288-0086  
432-254-4949  
432-556-4269  
432-557-5668

**Carlsbad, Eddy County, New Mexico**

Ambulance  
State Police  
Sheriff's Office  
Fire Department  
Local Emergency Planning Committee  
Bureau of Land Management  
New Mexico Oil Conservation Division (Artesia)

911  
911 or 575-885-3138  
911 or 575-887-7551  
911 or 575-885-3125  
575-887-7553  
575-628-3471  
575-748-1283

**Hobbs, Lea County, New Mexico**

Ambulance  
State Police  
Sheriff's Office  
Fire Department  
Local Emergency Planning Committee  
New Mexico Oil Conservation Division

911  
911 or 575-392-5580  
911 or 575-396-3611  
911 or 575-397-9308  
575-393-2870  
575-393-6161

**Statewide and National Emergency Numbers**

New Mexico Department of Homeland Security  
and Emergency Management  
New Mexico State Emergency Operations  
Center (24 Hour Number)  
National Emergency Response Center

505-476-9600  
505-476-9635  
800-424-8802

**Other Numbers for Emergency Response**

Boots & Coots IWC

800-256-9688 or 281-931-8884

Cudd Pressure Control

432-563-3356

MCH Care Star Flight Service (air ambulance)

432-640-4000

Aerocare (air ambulance)

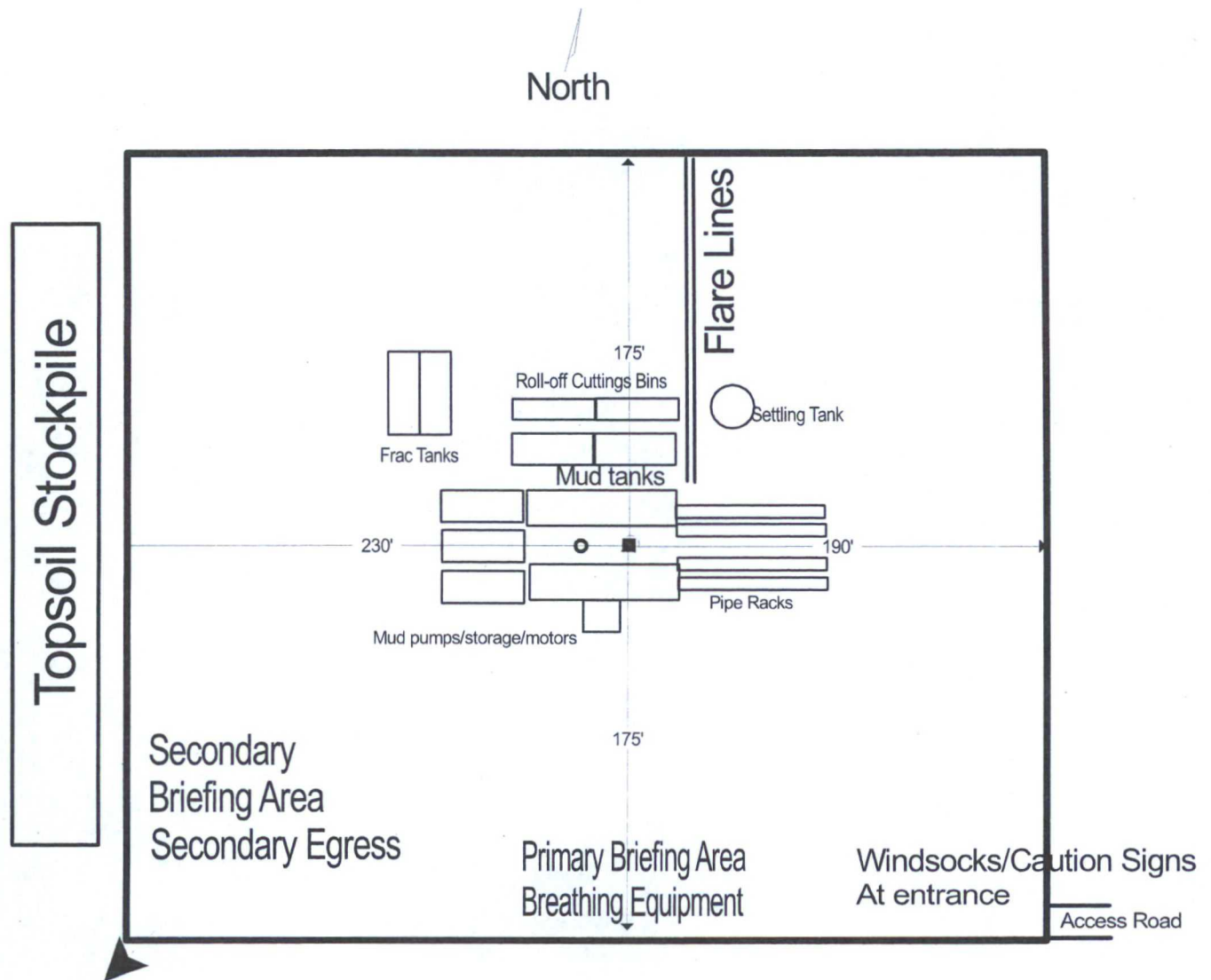
806-725-1111



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### H2S Plan Guidelines



Alarms will be placed on the mud tanks, at the shale shaker, and on the rig floor. Windssocks will also be present on the top of the substructure and near the mud tanks.

Terrain is flat, semi-brushy desert with little vegetation. The prevailing wind direction is NE. The wellpad can be evacuated in virtually any direction due to the nature of the landscape.

Fasken Oil and Ranch, Ltd.  
Baetz "23" Federal No. 4H  
Interim Reclamation Area

North

