



30-025-41381

HOBBS OCD

SEP 06 2013



## **HYDROGEN SULFIDE DRILLING OPERATIONS PLAN**

### **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 area prior to commencing drilling operations on this well:

1. The hazards & characteristics of hydrogen sulfide (H<sub>2</sub>S)
2. The proper use & maintenance of PPE & SCBA systems.
3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, & prevailing winds (seasonal).
4. The proper techniques for first aid & rescue procedures.

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

1. The effects of H<sub>2</sub>S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action & shut-in procedures when drilling or reworking a well, BOP & well control procedures.
3. The contents & requirements of the H<sub>2</sub>S Drilling Operations Plan & Public Protection Plan.

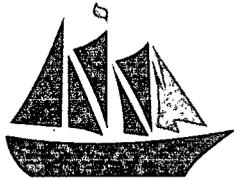
There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500ft) and weekly H<sub>2</sub>S & well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

### **II. H<sub>2</sub>S Safety Equipment & Systems**

Note: All H<sub>2</sub>S safety equipment will be installed, tested, & operational when drilling reaches a depth of 500' above, or three days prior to penetrating the first zone containing or reasonably expected to contain H<sub>2</sub>S.

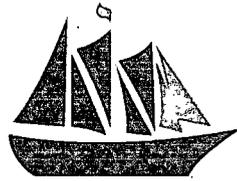
#### **A. Well Control Equipment:**

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- Flare Line
  - Choke manifold
  - Blind rams & pipe rams to accommodate all pipe sizes with properly sized closing unit.
  - Auxiliary equipment to include: annular preventer, mud-gas separator, & rotating head.
- B. Protective equipment for essential personnel:
- 30-minute SCBA units located in the dog house & at briefing areas. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.
- C. H<sub>2</sub>S detection and monitoring equipment:
- (2) portable H<sub>2</sub>S monitors positioned on location for best coverage & response. These units have warning lights & audible sirens when H<sub>2</sub>S levels of 20ppm are reached. These units are also capable of detecting SO<sub>2</sub>, which is a byproduct of burning H<sub>2</sub>S.
- D. Visual warning systems:
- Wind direction indicators: will be shown on well site diagram.
  - 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 so that it is legible at a reasonable distance from the immediate location. Bilingual signs will also be used, when appropriate.
- E. 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 will help minimize hazards when penetrating H<sub>2</sub>S bearing zones.
- F. Metallurgy:
- All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, and valves shall be suitable for H<sub>2</sub>S service.
- G. Communication:



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- Company vehicles equipped with cellular phones, as well as a satellite phone in the company man's trailer.

**ENDURANCE RESOURCES LLC HAS CONDUCTED A REVIEW TO DETERMINE IF AN H2S CONTINGENCY PLAN IS REQUIRED FOR THE ABOVE MENTIONED WELL. WE WERE ABLE TO CONDUCT THAT ANY POTENTIAL HAZARDOUS VOLUME WOULD BE MINIMAL (IF ANY PRESENT) FROM SURFACE TO TD. THEREFORE, WE DON'T BELIEVE THAT A H2S PLAN IS NECESSARY.**

**EMERGENCY CALL LIST**

Endurance Operations Office: (575) 308.0722

Kale Jackson-Sr Completions Engineer: (575) 914.3355

Manny Sirgo- VP Operations: (432) 413.0085

Randall Harris- VP Geology: (575) 365.7747

Don Ritter- CEO: (469) 556.3757

**EMERGENCY RESPONSE NUMBERS**

**HOBBS:**

State Police: 575.392.5588

City Police: 575.397.9265

Sherriff's Office: 575.393.2515

Ambulance: 911

Fire Department: 575.397.9308

LEPC: 575.393.2870

NMOCD: 575.393.6161

BLM: 575.393.3612



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**CARLSBAD:**

State Police: 575.885.3137

City Police: 575.885.2111

Sherriff's Office: 575.887.7551

Ambulance: 911

Fire Department: 575.885.2111

LEPC: 575.887.3798

BLM: 575.887.6544

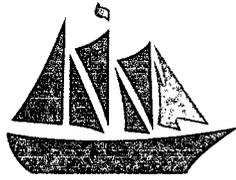
**EMERGENCY SERVICES:**

Boots & Coots: 1.800.256.9688

Cudd Pressure Control: 915.699.0139

Halliburton: 575.746.2757

Baker Hughes: 575.746.3569



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PROPOSED INTERIM SITE RECLAMATION

