

30-025-41699  
Hydrogen Sulfide Drilling Operations Plan  
AIRSTrip 31 STATE COM 5H  
Sec 31, T18S, R35E  
150' FSL & 660' FEL  
Lea County N.M.

HOBBS OCD

FEB 26 2014

RECEIVED

1. Company and contract personnel admitted on location should be trained by a qualified H<sub>2</sub>S safety instructor to recognize and handle following:
  - A. Characteristics of H<sub>2</sub>S gas
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems
  - D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing knowledge
  - E. Evacuation procedure, routes and first aid support
  - F. Proper use of 30 minutes Pressure-on-Demand Air Pack
2. Supervisory personnel will be trained in the following areas:
  - A. Effects of H<sub>2</sub>S on metal components.
  - B. Corrective action and shut in procedures, blowout prevention, and well control procedure.
  - C. Contents of Hydrogen Sulfide Drilling Operations Plan.
3. H<sub>2</sub>S Detection and Alarm Systems will be in place before commencing any operations.
  - A. H<sub>2</sub>S detectors and audio alarm system to be located at wellhead, shale shaker and mud pits. Will be installed and maintained by third party safety company.
  - B. Thirty minute self-contained work unit located in at briefing areas.
3. Windsack and/or Wind Streamers
  - A. Windsack at mud pit area (high enough to be visible)
  - B. Windsack on dog house (high enough to be visible)
4. Condition Flags and Signs
  - A. H<sub>2</sub>S warning signs on lease access road into location
  - B. Flags displayed on sign at location entrance
    1. Green flag indicates "Normal Safe Conditions"
    2. Yellow Flag indicates "Potential Pressure and Danger"
    3. Red Flag indicates "Danger - H<sub>2</sub>S Present in High Concentrations" *admit only emergency personnel*
5. Well Control Equipment
  - A.
    - Annular preventers\*
    - Double ram with blind rams and pipe rams\*
    - Drilling spool, or blowout preventer with 2 side outlets (choke side shall be a 3-inch minimum diameter, kill side shall be at least 2-inch diameter)\*
    - Kill line (2 inch minimum)
    - A minimum of 2 choke line valves (3 inch minimum)\*
    - 3 inch diameter choke line
    - 2 kill line valves, one of which shall be a check valve (2 inch minimum)\*
    - 2 chokes (refer to diagram in Attachment 1)
    - Pressure gauge on choke manifold
    - Upper Kelly cock valve with handle available
    - Safety valve and subs to fit all drill string connections in use
    - All BOPE connections subjected to well pressure shall be flanged, welded, or clamped\*
    - Fill-up line above the uppermost preventer.
  - B. Also see BOP and Choke exhibit.

MAR 03 2014

6. Communication

- A. While working under masks chalkboards will be used for communication
- B. Hand signals will be used where chalk board is inappropriate
- C. Two -way radios or cell phones used to communicate off location or minimally in Drilling Foreman's trailer or living quarters
- D.

7. Drill Stem Testing (**not planned**)

- A. Exhausts watered
- B. Flare line equipped with electric Igniter/propane pilot light in case gas reaches surface
- C. If location near dwelling closed DST will be performed

9. If  $H_2S$  encountered, mud system shall be addressed to maintain control of formation. A mud gas separator will be brought into service along with  $H_2S$  scavengers, if necessary. pH will be maintained at 10, to minimize  $H_2S$  in the system. Hydrogen sulfide scavengers will also be used to minimize hazards while drilling the well.

## PUBLIC PROTECTION PLAN FOR EMERGENCY CONTACTS

### **HARVEY E. YATES**

(575) 623-6601

### **Company Personnel**

Lanny Overby	Prod. Enrineer	575-623-6601 575-317-5059
Keith Cannon	Drilling Supt.	575-623-6601 575-626-1936

### **ARTESIA N.M.**

Ambulance	911
State Police	575-746-5000
City Police	575-746-5000
Sheriff's Office	575-746-9888
Fire Department	575-746-5050 or 575-746-5051
N.M.O.C.D	575-748-1283

### **CARLSBAD N.M.**

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-885-3125 or 575-885-2111
Carlsbad BLM	575-887-6544

### **HOBBS N.M.**

Ambulance	911
State Police	575-392-5588
City Police	575-397-9265
Sheriff's Office	575-396-3611
Fire Department	575-397-9308
N.M.O.C.D	575-393-6161
Hobbs BLM	575-393-3612

Flight for Life (Lubbock Tx)	806-743-9911
Aerocare (Lubbock Tx)	806-747-8923
Med flight air Ambulance (Albuq NM)	505-842-4433
SB air Med Services (Albuq NM)	505-842-4949

Boots & Coots IWC	800-256-9688 or 281-931-8884
Cudd Pressure Control	915-699-0139 or 915-563-3356
BJ Services	(Artesia NM) 575-746-3569
	(Hobbs NM) 575-392-5556

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
24 Hour	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635