iv. Additional testing will be initiated subsequent to setting the 4 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

## 10. Potential Hazards:

a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. No H2S is anticipated to be encountered.

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## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

- 1. All company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
  - a. Characteristics of H2S
  - b. Physical effects and hazards
  - c. Proper use of safety equipment and life support systems
  - d. Principle and operations of H2S detectors, warning system and briefing areas
  - e. Evacuation procedures, routes and first aid
  - f. Proper use of 30-minute pressure demand air pack

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- 2. H2S Detection and alarm System
  - a. H2S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
- 3. Windsock and/or wind streamers
  - a. Windsock at mud pit area should be high enough to be visible
  - b. Windsock at briefing area should be high enough to be visible
  - c. There should be a windsock at entrance to location
- 4. Condition Flags and Signs
  - a. Warning Sign on access road to location ...
  - b. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure or danger. Red flag, danger, H2S present in Dangerous concentration. Only emergency personnel admitted to location.

- 5. Well Control Equipment
  - a. See Exhibit 3, 3A, and 3B
- 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 radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters
- 7. Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment
  - If H2S is encountered, mud system will be altered if necessary to maintain control of formation.
  - A mud gas separator will be brought into service along with H2S scavengers if necessary,

## **Emergency Procedures**

In the case of a release of gas containing H2S, the first responders must isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the responders must evacuate any public places encompassed by the 100 ppm ROE. First responders must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

All responders must have training in the detection of H2S, measures for protection again the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H2S monitors and air packs in order to control the release. Use the "buddy system" to ensure no injuries during the response.