## II. <u>H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS</u>

Note: All  $H_2S$  safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain  $H_2S$ .

- 1. Well Control Equipment:
  - A. Flare Line.
  - B. Choke manifold.
  - 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, rotating head.
- 2. Protective equipment for essential personnel:
  - A. Mark II Surviveair 30-minute units located in the dog house and at briefing areas, as indicated on well site diagram.
- 3. H<sub>2</sub>S detection and monitoring equipment:
  - A. 2 portable H<sub>2</sub>S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H<sub>2</sub>S levels of 20 ppm are reached.
- 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 readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.