

1. Well Control Equipment:
  - A. Flare line with electronic igniter or continuous pilot.
  - B. Choke manifold with a minimum of one remote 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, rotating head, and flare gun with flares.
2. Protective Equipment for Essential Personnel:
  - A. Mark II Surviveair 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.
3. H2S Detection and Monitoring Equipment:
  - A. Two 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. One portable SO2 monitor positioned near flare line.
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.
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 will minimize hazards when penetrating H2S bearing zones.
  - B. A mud-gas separator and an H2S gas buster will be utilized.
6. Metallurgy:
  - A. All drill strings, casings, tubing, wellhead, blowout preventors, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
  - B. All elastomers used for packing and seals shall be H2S trim.

7. Communication:

- A. Radio communications in company vehicles including cellular telephone and two-way radio.
- B. Land line (telephone) communications at field office.

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 will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill stem-testing operations conducted in an H<sub>2</sub>S environment will use the closed chamber method of testing.