



## Hydrogen Sulfide Plan

- A. All personnel shall receive proper awareness H<sub>2</sub>S training.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment
  - a. Well Control Equipment
    - i. Flare line 150' from wellhead to be ignited by auto ignition sparking system.
    - ii. Choke manifold with a remotely operated hydraulic choke.
    - iii. Mud/gas separator
  - b. Protective equipment for essential personnel
    - i. Breathing Apparatus
      - 1. Rescue packs (SCBA) – 1 unit shall be placed at each briefing area, 2 shall be stored in a safety trailer on site.
      - 2. Work/Escapes packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity
      - 3. Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation
    - ii. Auxiliary Rescue Equipment
      - 1. Stretcher
      - 2. Two OSHA full body harnesses
      - 3. 100 feet of 5/8 inches OSHA approved rope
      - 4. 1-20# class ABC fire extinguisher
  - c. H<sub>2</sub>S Detection and Monitoring Equipment
    - i. A stationary detector with three sensors will be placed in the doghouse if equipped, set to visually alarm at 10 ppm and audible at 14 ppm. The detector will be calibrated a minimum of every 30 days or as needed. The sensors will be placed in the following places:
      - 1. Rig Floor
      - 2. Below Rig Floor / Near BOPs
      - 3. End of flow line or where well bore fluid is being discharged (near shakers)
    - ii. If H<sub>2</sub>S is encountered, measured values and formations will be provided to the BLM.
  - d. Visual Warning Systems
    - i. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
    - ii. A colored condition flag will be on display, reflecting the current condition at the site at the time.
    - iii. Two windsocks will be placed in strategic locations, visible from all angles.
  - e. Mud Program
    - i. The Mud program will be designed to minimize the volume of H<sub>2</sub>S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H<sub>2</sub>S bearing zones.



- f. Metallurgy
  - i. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H<sub>2</sub>S service at the anticipated operating pressures to prevent sour sulfide stress cracking.
- g. Communication
  - i. Communication will be via cell phones and walkie talkies on location.

Franklin Mountain Energy has conducted a review of offset operated wells to determine if an H<sub>2</sub>S contingency plan is required for the proposed well. Based on concentrations of offset wells, proximity to main roads, and distance to populated areas, the radius of exposure created by a potential release was determined to be minimal and low enough to not necessitate an H<sub>2</sub>S contingency plan. This will be reevaluated during wellbore construction if H<sub>2</sub>S is observed and after the well is on production.



## **Emergency Contact List:**

<b>Vladimir Roudakov, Drilling Engineer</b>	<b>Cell 720 933 9784</b>
<b>Rachael Overbey, Project and Regulatory Director</b>	<b>Cell 303 570 4057</b>
<b>Franklin Mountain Energy Afterhours Emergency Call Tree:</b>	<b>720-640-7517</b>

### **EMERGENCY NUMBERS:**

<u>Agency</u>	<u>Telephone Number</u>
BLM – Carlsbad Mainline	575-234-5972
BLM – Spill Emergency	575-234-6235
BLM – Engineering Emergency	575-361-2822
NMOCD District 1 – Hobbs Mainline	575-393-6161
NMOCD Emergency Line	575-370-3186
Wild Well Control	281-784-4700
H2S Emergency response:	
Air Ambulance New Mexico – Lea Co Reginal	575-391-2934
Lea County Sheriff's Department	575-396-3611
Fire Department:	
Carlsbad	575-885-3125
Artesia	575-746-5050
Lea County Regional Medical Center	575-492-5000
Jal Community Hospital	505-395-2511
Lea County Emergency Management	575-396-8602
Poison Control Center	800-222-1222