

**HYDROGEN SULFIDE (H<sub>2</sub>S) CONTINGENCY PLAN****Assumed 100 ppm ROE = 3000'****100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.****Emergency Procedures****In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must**

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
  - Detection of H<sub>2</sub>S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency response.

**Ignition of Gas source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

**Characteristics of H<sub>2</sub>S and SO<sub>2</sub>**

| Common Name      | Chemical Formula | Specific Gravity | Threshold Limit | Hazardous Limit | Lethal Concentration |
|------------------|------------------|------------------|-----------------|-----------------|----------------------|
| Hydrogen Sulfide | H <sub>2</sub> S | 1.189<br>Air = 1 | 10 ppm          | 100 ppm/hr      | 600 ppm              |
| Sulfur Dioxide   | SO <sub>2</sub>  | 2.21<br>Air = 1  | 2 ppm           | N/A             | 1000 ppm             |

**Contacting Authorities**

Lime Rock Resources personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Lime Rock Resources response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

## H<sub>2</sub>S CONTINGENCY PLAN EMERGENCY CONTACTS

**Company Office –Lime Rock Resources** 713-292-9510  
**Answering Service (During Non-Office Hours)** 713-292-9555

### Key Personnel

| <u>Name</u>  | <u>Title</u>          | <u>Phone Number</u>             |
|--------------|-----------------------|---------------------------------|
| Sid Ashworth | Production Engineer   | 713-292-9526 Cell: 713-906-7750 |
| Mike Barrett | Production Supervisor | 575-623-8424 Cell: 505-353-2644 |

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|                                      |              |
|--------------------------------------|--------------|
| Ambulance                            | 911          |
| State Police                         | 575-746-2703 |
| City Police                          | 575-746-2703 |
| Sheriff's Office                     | 575-746-9888 |
| Fire Department                      | 575-746-2701 |
| Local Emergency Planning Committee   | 575-746-2122 |
| New Mexico Oil Conservation Division | 575-748-1283 |

### Carlsbad

|                                    |               |
|------------------------------------|---------------|
| Ambulance                          | 911           |
| State Police                       | 575-8885-3137 |
| City Police                        | 575-885-2111  |
| Sheriff's Office                   | 575-887-7551  |
| Fire Department                    | 575-887-3798  |
| Local Emergency Planning Committee | 575-887-6544  |
| US Bureau of Land Management       | 575-887-6544  |

|                                                     |              |
|-----------------------------------------------------|--------------|
| New Mexico Emergency Response Commission (Santa Fe) | 505-476-9600 |
| 24 Hour                                             | 505-827-9126 |
| New Mexico State Emergency Operations Center        | 505-476-9635 |
| National Emergency Response Center (Washington, DC) | 800-424-8802 |

### Other

|                                                                |                              |
|----------------------------------------------------------------|------------------------------|
| Boots & Coots IWC                                              | 800-256-9688 or 281-931-8884 |
| Cudd PressureControl                                           | 915-699-0139 or 915-563-3356 |
| Halliburton                                                    | 575-746-2757                 |
| B. J. Services                                                 | 575-746-3569                 |
| Flight For Life – 4000 24 <sup>th</sup> St. Lubbock, Texas     | 806-743-9911                 |
| Aerocare – R3, Box 49F, Lubbock, Texas                         | 806-747-8923                 |
| Med Flight Air Amb – 2301 Yale Blvd SE #D3, Albuquerque, NM    | 505-842-4433                 |
| S B Air Med Service – 2505 Clark Carr Loop SE, Albuquerque, NM | 505-842-4949                 |