HOBBS OCD

Hydrogen Sulfide Drilling Operations Plan **Triste Draw 25 Federal 1** Cimarex Energy Co. of Colorado Unit P, Section 25 T23S-R32E; Lea County, NM

DEC 04 2012

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.
- 2 H<sub>2</sub>S Detection and Alarm Systems:
  - A. H<sub>2</sub>S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.
- 3 Windsock and/or wind streamers:
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock at briefing area should be high enough to be visible.
- 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 indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H<sub>2</sub>S present in dangerous concentration). Only emergency personnel admitted to location.

5 Well control equipment:

A. See exhibit "E"

#### 6 <u>Communication:</u>

- 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 Drillstem Testing:

No DSTs or cores are planned at this time.

- 8 Drilling contractor supervisor will be required to be familiar with the effects H<sub>2</sub>S has on tubular goods and other mechanical equipment.
- 9 If H<sub>2</sub>S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H<sub>2</sub>S scavengers if necessary.

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# H₂S Contingency Plan Triste Draw 25 Federal 1 Cimarex Energy Co. of Colorado Unit P, Section 25 T23S-R32E; Lea County, NM

## **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.
- $\star$  Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- $\star$  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 there is an ignition of the gas.

Common	Chemical	Specific	Threshold	Hazardous	Lethal
Name	Formula	Gravity	Limit	Limit	Concentration
Hydrogen Sulfide	H₂S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21 Air=1	2 ppm	N/A	1000 ppm

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

## **Contacting Authorities**

Cimarex Energy Co. of Colorado's personnel must liaise 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. Cimarex Energy Co. of Colorado's 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 **Triste Draw 25 Federal 1** Cimarex Energy Co. of Colorado Unit P, Section 25 T23S-R32E; Lea County, NM

Cimarex Energy Co. of Color	800-969-4789			
Co. Office and After-Hours I				
<u>Key Personnel</u> Name	Title	Office		Mobile
Larry Seigrist	Drilling Manager	432-620-1934		580-243-8485
Scott Lucas	Field Drilling Super	452 020 1554		432-894-5572
Jeff Lajoie	Field Drilling Super			432-257-9889
Roy Shirley	Field Super			432-634-2136
Artesia				
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	575-746-2122			
New Mexico Oil Conserva	ition Division	575-748-1283		
Carlsbad	·			
Ambulance		911		
State Police		575-885-3137		
City Police		575-885-2111	:	
Sheriff's Office		575-887-7551	;	
Fire Department		575-887-3798	1	
Local Emergency Planning	575-887-6544			
US Bureau of Land Manag	575-887-6544	1		
<u>Santa Fe</u>				
New Mexico Emergency I	505-476-9600			
New Mexico Emergency I	505-827-9126			
New Mexico State Emerg	505-476-9635			
National_				
National Emergency Response Center (Washington, D.C.)		800-424-8802		
Medical				
	St · Lubbock TX	806-743-9911		
ight for Life - 4000 24th St.; Lubbock, TX erocare - R3, Box 49F; Lubbock, TX		806-743-9911		
Med Flight Air Amb - 230	505-842-4433			
	505-842-4949			
35 All Web Service - 2505	5 Clark Carr Loop S.E.; Albuquerque, NM	JUJ-042-4343		
<u>Other</u>				
Boots & Coots IWC		800-256-9688	or	281-931-8884
Cudd Pressure Control		432-699-0139	or	432-563-3356
Halliburton		575-746-2757		
B.J. Services		575-746-3569		

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