## 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.

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F. Proper use of 30 minute pressure demand air pack.

### 2 H<sub>2</sub>S Detection and Alarm Systems:

following:

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. HOBBSOCD

Hydrogen Sulfide Drilling Operations Plan

Hallertau 4 Federal 6H Cimarex Energy Co. of Colorado

Unit C, Section 4 T26S-R32E, Lea County, NM

1 All Company and Contract personnel admitted on location must be trained by a qualified  $H_2S$  safety instructor to the

### 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.

### **Condition Flags and Signs:** 4

- 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 Communication:

- 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.

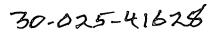
### 7 Drillstem Testing:

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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### <u>H₂S Contingency Plan</u> Hallertau 4 Federal 6H

Cimarex Energy Co. of Colorado

Unit C, Section 4 T26S-R32E, Lea County, NM	HOBBSOCD
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### 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  $H_2S$  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 ( $SO_2$ ). 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**

Stata Production Company'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. Stata Production Company's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

### **Company Office**

Cimarex Energy Co. of Colorado Co. Office and After-Hours Menu 800-969-4789

### Key Personnel

Name	, - may - Title	Office	Mobile
Larry Seigrist	Drilling Manager	432-620-1934	580-243-8285
Scott Lucas	Drilling Superintendent		432-894-5572
Roy Shirley	Field Superintendent		432-634-2136

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	

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Ambulance	911
State Police	575-885-3137
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
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635 

National

National Emergency Response Center (Washington, D.C.) 800-424-8802

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Flight for Life - 4000 24th St.; Lubbock, TX	806-743-9911	
Aerocare - R3, Box 49F; Lubbock, TX	806-747-8923	
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM	505-842-4433	

SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM 505-842-4949

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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		

