Hydrogen Sulfide Drilling Operations Plan

Thyme APY Federal 5 1

Cimarex Energy Co. of Colorado Lot 4, Section 1

T23S-R32E; Lea County, NM

30 - 025 - 41420 SEP 192013

1 All Company and Contract personnel admitted on location must be trained by a qualified RECEIVED

CLG 9-24-2013 H₂S safety instructor to the following:

- A. Characteristics of H₂S
- B. Physical effects and hazards
- C. Proper use of safety equipment and life support systems.
- D. Principle and operation of H₂S detectors, warning system and briefing areas.
- E. Evacuation procedure, routes and first aid.
- F. Proper use of 30 minute pressure demand air pack.

2 H₂S Detection and Alarm Systems:

A. H₂S 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 (H₂S 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 H₂S has on tubular goods and other mechanical equipment.
- 9 If H₂S 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 H₂S scavengers if necessary.

H₂S Contingency Plan

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Emergency Procedures

In the event of a release of gas containing H₂S, 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 H₂S 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 H₂S, 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 (SO₂). 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.

Characteristics of H₂S and SO₂

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

Contacting Authorities

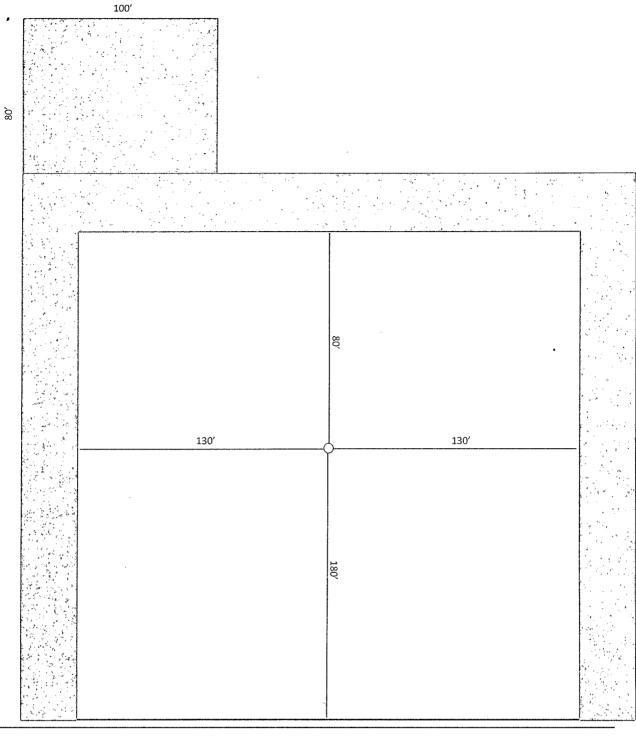
Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, 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).

H₂S Contingency Plan Emergency Contacts

Thyme APY Federal 5

Cimarex Energy Co. of Colorado Lot 4, Section 1 T23S-R32E; Lea County, NM

Cimarex Energy Co. of Colorac	800-969-4789			
Co. Office and After-Hours Me	enu			
Key Personnel				
Name	Title	Office		Mobile
Larry Seigrist	Drilling Manager	432-620-1934		580-243-8485
Scott Lucas	Drilling Superintendent			432-894-5572
Roy Shirley	Construction Superintendent	4.50		432-634-2136
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<u>Artesia</u>				
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 C	575-746-2122			
New Mexico Oil Conservation	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			
Local Emergency Planning C	575-887-6544	_		
US Bureau of Land Manager	ment	575-887-6544		
Santa Fe				
New Mexico Emergency Re	505-476-9600			
New Mexico Emergency Res	505-827-9126			
New Mexico State Emergen	cy Operations Center	505-476-9635		
<u>National</u>		000 401 0000		·
National Emergency Respor	se Center (Washington, D.C.)	800-424-8802		
Medical		006 740 0044	·	
Flight for Life - 4000 24th St	<u> </u>	806-743-9911		
Aerocare - R3, Box 49F; Lub		806-747-8923		
	/ale Blvd S.E., #D3; Albuquerque, NM	505-842-4433	_	
SB Air Med Service - 2505 C	lark Carr Loop S.E.; Albuquerque, NM	505-842-4949		
Other		000.05	_	201.05
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		



Access Road



