Hydrogen Sulfide Drilling Operations Plan Dos Equis 13 Federal Com #1H Cimarex Energy Co. UL: A, Sec. 13, 24S, 32E Lea Co., NM

HOBBS OCD

- 1 All Company and Contract personnel admitted on location must be trained by a qualified OCT 31 2013 H2S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S
  - B. Physical effects and hazards

- RECEIVED
- C. Principal and operation of H2S detectors, warning system and briefing areas.
- D. Evacuation procedure, routes and first aid.
- E. Proper use of safety equipment & life support systems
- F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.
- 2 H<sub>2</sub>S Detection and Alarm Systems:
  - A. H2S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may play placed as deemed necessary.
  - Β.

An audio alarm system will be installed on the derrick floor and in the top doghouse.

- 3 Windsock and/or wind streamers:
  - A. Windsock at mudpit area should be high enough to be visible.
  - В.

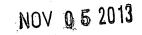
Windsock on the rig floor and / or top doghouse should be high enough to be visible.

- 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 H2S trained and certified personnel admitted to location.
- 5 Well control equipment:
  - A. See exhibit "E-1"
- 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 r 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 **Dos Equis 13 Federal Com #1H** Cimarex Energy Co. UL: A, Sec. 13, 24S, 32E Lea Co., NM

### **Emergency Procedures**

In the event of a release of gas containing  $H_2S$ , 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 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 (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.

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

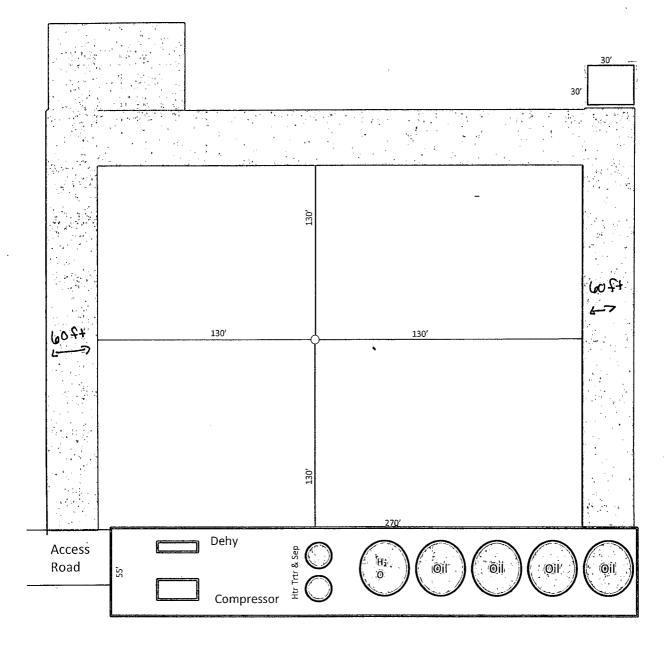
Common	Chemical	Specific	Threshold	Hazardous	Lethal
Name	Formula	Gravity	Limit	Limit	Concentration
Hydrogen Sulfide	H₂S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO2	2.21 Air=1	2 ppm	N/A	1000 ppm

#### **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).

# H<sub>2</sub>S Contingency Plan Emergency Contacts **Dos Equis 13 Federal Com #1H** Cimarex Energy Co. UL: A, Sec. 13, 24S, 32E Lea Co., NM

	800-969-4789		
I			
Title	Office		Mobile
Drilling Manager	432-620-1934		580-243-8485
Drilling Superintendent	432-620-1933	_	806-640-2605
Drilling Superintendent	432-620-1989		432-894-5572
Construction Foreman			432-270-0313
Construction Superintendent			432-634-2136
- 12 - 1990 - 14 - 1990 - 14 - 1997 - 17 - 1997 - 14 - 1997 - 14 - 1997 - 14 - 1997 - 14 - 1997 - 14 - 1997 - 1			
. 32 0000 12 0001 10 10001 10 3000 10 1000 31 0000 31 0000 11 00001 10 00001 10 0000			
	911		
	575-746-2703		
	575-746-2703		
Sheriff's Office			
	575-746-2701		
Local Emergency Planning Committee			
Division	575-748-1283		
Ambulance			
State Police			
City Police			
Sheriff's Office			
Fire Department			
Local Emergency Planning Committee US Bureau of Land Management			
ent	575-887-6544		
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New Mexico Emergency Response Commission (Santa Fe)			
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs			
Operations Center	505-476-9635		
Conter (Washington D.C.)	800 424-0003		
National Emergency Response Center (Washington, D.C.)			
<u>Aedical</u> light for Life - 4000 24th St.; Lubbock, TX			
erocare - R3, Box 49F; Lubbock, TX			
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM			
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM			
Rear Loop S.E., Albuquerque, Mar	505 042-555		
	800-256-9688	or	281-931-8884
Boots & Coots IWC			432-563-3356
			.52 555 5550
	575-746-2757		
	Drilling Manager Drilling Superintendent Construction Foreman Construction Superintendent	Title Office   Drilling Manager 432-620-1934   Drilling Superintendent 432-620-1933   Drilling Superintendent 432-620-1989   Construction Foreman Construction Superintendent   011 575-746-2703   575-746-2703 575-746-2703   575-746-2703 575-746-2703   575-746-2703 575-746-2703   575-746-2703 575-746-2703   575-746-2701 575-746-2701   nmittee 575-746-2122   Division 575-748-2123   911 575-885-3137   575-885-3137 575-885-2111   575-887-7551 575-887-7551   575-887-7551 575-887-6544   ent 575-887-6544   onse Commission (Santa Fe) 505-476-9600   onse Commission (Santa Fe) 24 Hrs 505-827-9126   Operations Center 505-476-9603   e Center (Washington, D.C.) 800-424-8802   Lubbock, TX 806-743-9911   ck, TX 806-743-9911   ck, TX 806-743-9911   ck, TX	Title Office   Drilling Manager 432-620-1934   Drilling Superintendent 432-620-1933   Drilling Superintendent 432-620-1989   Construction Foreman Construction Superintendent   Construction Superintendent 911   S75-746-2703 575-746-2703   Division 575-746-2703   S75-746-2703 575-746-2703   S75-746-2703 575-887-3137   S75-887-3137 575-887-3551   S75-887-3798 575-887-6544   ent 575-887-6544   ent <t< td=""></t<>



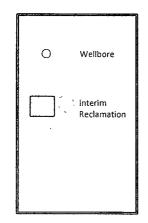


Exhibit D-1 Interim Reclamation Diagram **Dos Equis 13 Federal Com #1H** Cimarex Energy Co. 13-24S-32E SHL 330 FNL & 660 FEL BHL 330 FSL & 660 FEL Lea County, NM

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