## SHACKELFORD OIL COMPANY

**HOBBS OCD** 

APR 2 7 2015

## LUSK WEST DELAWARE UNIT #11 HYDROGEN SULFIDE (H2S) CONTINGENCY DRILLING PLAN

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### Assumed 100 ppm ROE = 3000'

100 ppm H2S concentration shall trigger activation of this plan.

This is an open drilling site.  $H_2S$  monitoring equipment and emergency response equipment will be rigged up and in use when the company drills out from under surface casing.  $H_2S$  monitors, warning signs, wind indicators and flags will be in use.

- A. All personnel shall receive proper H2S training in accordance with Onshore Order 6 III.C.3.a
- B. Briefing Area: Two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment:
  - Well control equipment
    - a. Flare line 150' from wellhead to be ignited by flare gun.
    - b. Choke manifold with a remotely operated choke.
    - c. Mud/Gas Seperator.
  - Protective Equipment for essential personnel. Breathing apparatus:
    - a. Rescue Packs (SCBA) 1 unit shall be placed ar each briefing area. 2 units shall be stored in the safety trailer.
    - b. Work/Escape packs 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
    - c. Emergency Escape Packs 4 packs shall be stored in the doghouse for emergency evacuation.

Auxillary Rescue Equipment:

- a. Stretcher
- b. Two OSHA full body harness
- c. 100 ft. 5/8" OSHA approved rope
- d. One 20# class ABC fire extinguisher
- H2S detection and monitoring Equipment:

The stationary detector with three sensors will be placed in the upper doghouse, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor, Bell nipple, end of flare line or where well bore fluid is being discharged (Gas sample tubes will be stored in the safety trailer).

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- Visual warning systems.
  - a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
  - b. A colored condition flag will be on display, reflecting the current condition, at the drilling site.
  - c. Two wind socks will be placed in strategic locations being visible from all angles.

#### • Mud Program:

The mud program has been designated to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.

- Metallurgy:
  - a. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, shall be suitable for H2S service.
  - b. All elastomers used for packing and seals shall be H2S trim.
- Communication:

Communication will be via two way radio in emergency and company vehicles. Cell phones and land lines where available.

#### **Contacting Authorities**

Shackelford Oil Company 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. Shackelford Oil Company's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER) and BLM Onshore Order #6.

#### H<sub>2</sub>S Operations

Though no  $H_2S$  is anticipated during the drilling operation, this contingency plan will provide for methods to ensure the well is kept under control in the event an  $H_2S$  reading of 100 ppm or more are encountered. Once personnel are safe and the proper protective gear is in place and on personnel, the operator and rig crew essential personnel will ensure the well is under control, suspend drilling operations and shut-in the well (unless pressure build up or other operational situations dictate suspending operations will prevent well control), increase the mud weight and circulate all gas from the hole utilizing the mud/gas separator downstream of the choke, the choke manifold and the emergency flare system located 150' from the well. Bring the mud system into compliance and the  $H_2S$  level below 10 ppm, then notify all emergency officers that drilling ahead is practical and safe.

Proceed with drilling ahead only after all provisions of Onshore Order 6, Section III.C. have been satisfied.

# H2S CONTINGENCY PLAN EMERGENCY CONTACTS

#### Company Office -Shackelford Oil Co.

#### 432-682-9784

Key Personnel			
Name	Title	Phone Number	
Bob Shackelford	Production Engineer	432-682-9784 Cell: 432-213-7090	
Don Shackelford	President	432-682-9784	

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

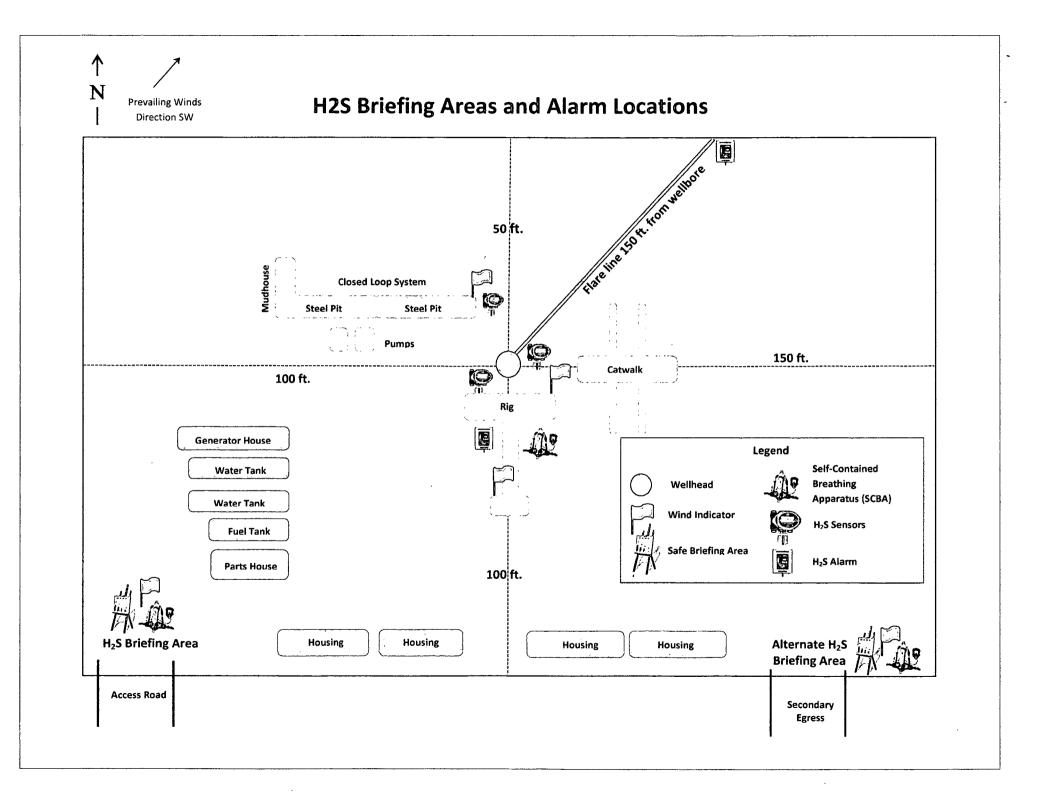
Ambulance	911
State Police	575-8885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

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

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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 24th St. Lubbock, Texas		806-743-9911
Aerocare - R3, Box 49F, Lubbock, Texas		806-747-8923
Med Flight Air Amb - 2301 Yale Blvd SE #D3, Albuq., NM		505-842-4433
S B Air Med Service - 2505 Clark Carr Loop SE, Albuq.	., NM	505-842-4949



## EXHIBIT C

# Interim Reclamation & Production Facilities LUSK WEST DELAWARE UNIT #11 V-DOOR EAST

