



HOBBS OCD

## Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan NOV 15 2012

**Pryor Federal-State COM 4H**

**Assumed 100ppm ROE= 3000'**

ELG 11-19-2012  
RECEIVED

100ppm H<sub>2</sub>S concentration shall trigger activation of this plan.

This is an open drilling site. H<sub>2</sub>S monitoring equipment and emergency response equipment will be rigged up and in use when the company drills out from under surface casing. H<sub>2</sub>S monitors, warning signs, wind indicators, and flags will be in use.

- A. All personnel shall receive proper H<sub>2</sub>S training in accordance with Onshore Order 6, Section III.C.3a
- B. Briefing Area: Two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment
  - ❖ Well Control Equipment
    - i. Flare line 150' from wellhead to be ignited by flare gun
    - ii. Choke manifold with a remotely operated choke
    - iii. Mud/gas separator
  - ❖ Protective Equipment for Essential Personnel
    - i. Breathing Apparatus
      - 1. Recue Packs (SCBA)
        - a. One (1) unit shall be placed at each briefing area
        - b. Two (2) units shall be stored in the safety trailer.
      - 2. Work/Escapes Packs
        - a. Four (4) packs shall be stored on the rig floor with sufficient air hose not to restrict work activity
      - 3. Emergency Escape Packs
        - a. Four (4) packs shall be stored in the doghouse for emergency evacuation
  - ❖ Axillary Rescue Equipment
    - i. Stretcher
    - ii. Two (2) OSHA fully body harness
    - iii. 100ft 5/8" OSHA approved rope
    - iv. One (1) 20# class ABC fire extinguisher
  - ❖ H<sub>2</sub>S Detection and Monitoring Equipment
    - i. The stationary detector with three (3) sensors will be placed in the upper doghouse, set to visually alarm at 10ppm and audible at 14ppm.



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 wellbore fluid is being discharged (Gas sample tubes will be stored in safety trailer).

❖ Visual Warning Systems

- i. One (1) color condition sign will be placed at the entrance to the site reflecting possible conditions at the site.
- ii. One (1) colored condition flag will be on display, reflecting the current condition, at the drilling site.
- iii. Two (2) wind socks will be placed in strategic locations being visible from all angles.

D. Mud Program

- ❖ The mud program has been designated to minimize the volume of H<sub>2</sub>S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H<sub>2</sub>S bearing zones.

E. Metallurgy

- ❖ All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, shall be suitable for H<sub>2</sub>S service.
- ❖ All elastomers used for packing and seals shall be H<sub>2</sub>S trim.
- ❖ Wellhead equipment selected is suitable for H<sub>2</sub>S service.

F. Communication

- ❖ Communication will be via two way radio in emergency and company vehicles.
- ❖ Cell phones and land lines where available
- ❖ Satellite-based communication with Pason Services available

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

Though no H<sub>2</sub>S 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<sub>2</sub>S reading of 100ppm or more is encountered. Once personnel are safe and 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<sub>2</sub>S level below 10 ppm, then notify all emergency officers that drilling ahead is practical and safe.

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

### **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 New



Mexico Oil Conservation Division (NMOCD) and local officials. Additionally, the New Mexico State Police may become involved. New Mexico State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

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

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

GMT's personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the NMOCD must be notified of the release as soon as possible but no later than four (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 including directions to site. The following call list of essential and potential responders has been prepared for use during a release. GMT's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

### Eunice Office - Eddy & Lea Counties

EMSU at Oil Center, NM, 8/10ths mile west of Hwy 175  
Eunice, NM

757-394-2089

Buckeye Office at Lea County: From Hobbs, NM take Hwy 20/180  
West approx.. 10 miles to SH 529, turn NM on SH 529 for 3 miles,  
Turn North on Hwy 238, proceed North approx. 8 miles to Buckeye  
Field office (1/4 North of Buckeye store)

757-396-0542

#### **GMT Exploration Company, LLC Personnel**

BJ Cox, GMT Senior Production Superintendent

307-354-8895

Willie Dean, Dean's Pumping, Inc.

757-394-3123

Keith Kress, VP Operations

303-586-9281

#### **Sheriff Departments**

Eddy County

575-887-7551

Lea County

575-396-3611

**New Mexico State Police**

575-392-5588



# GMT EXPLORATION COMPANY LLC

ACQUISITIONS • EXPLORATION • PRODUCTION

## **Fire Departments**

Carlsbad	911 575-885-2111
Eunice	575-394-2111
Hobbs	575-397-9308
Jal	575-395-2221
Lovington	575-396-2359

## **Hospitals**

Carlsbad Medical Emergency	911 575-885-2111
Eunice Medical Emergency	575-394-2112
Hobbs Medical Emergency	575-397-9308
Jal Medical Emergency	575-395-2221
Lovington Medical Emergency	575-396-2359

## **Agent Notifications**

Bureau of Land Management	575-393-3612
New Mexico Oil Conservation Division	575-393-6161
Mosaic Potash – Carlsbad	575-887-2871

## **Contractors**

Sierra Engineering	432-683-8000
Forklift Enterprises	575-397-6431
Assurance Safety	575-396-9855
Gandy Corp – Dirt	575-396-4948
Champion – Chemical	575-393-7726

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**GMT Exploration Company, LLC**

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August 10, 2012

Exhibit 1

**Statement of Proper H2S Training for Personnel  
Pryor State 4H**

GMT Exploration Company, LLC ("GMT") will ensure that all personnel working on the Pryor State 4H shall receive the proper H2S training in accordance with Onshore Order 6: Section III.C.3a.

**Training Program.** GMT shall ensure that all personnel who will be working at the wellsite will be properly trained in H2S drilling and contingency procedures in accordance with the general training requirements outlined in the American Petroleum Institute's (API) Recommended Practice (RP) 49 (April 15, 1987 or subsequent editions) for Safe Drilling of Wells Containing Hydrogen Sulfide, Section 2. GMT also shall ensure that the training will be accomplished prior to a well coming under the terms of this Order (i.e., 3 days or 500 feet of known or probable H2S zone). In addition to the requirements of API RP-49, a minimum of an initial training session and weekly H2S and well control drills for all personnel in each working crew shall be conducted. The initial training session for each well shall include a review of the site specific Drilling Operations Plan and, if applicable, the Public Protection Plan.

All training sessions and drills shall be recorded on the driller's log or its equivalent.

At least 2 briefing areas shall be designated for assembly of personnel during emergency conditions, located a minimum of 150 feet from the well bore and 1 of the briefing areas shall be upwind of the well at all times. The briefing area located most normally upwind shall be designated as the "Primary Briefing Area."

One person (by job title) shall be designated and identified to all on-site personnel as the person primarily responsible for the overall operation of the on-site safety and training programs.





GMT Exploration  
Company, LLC

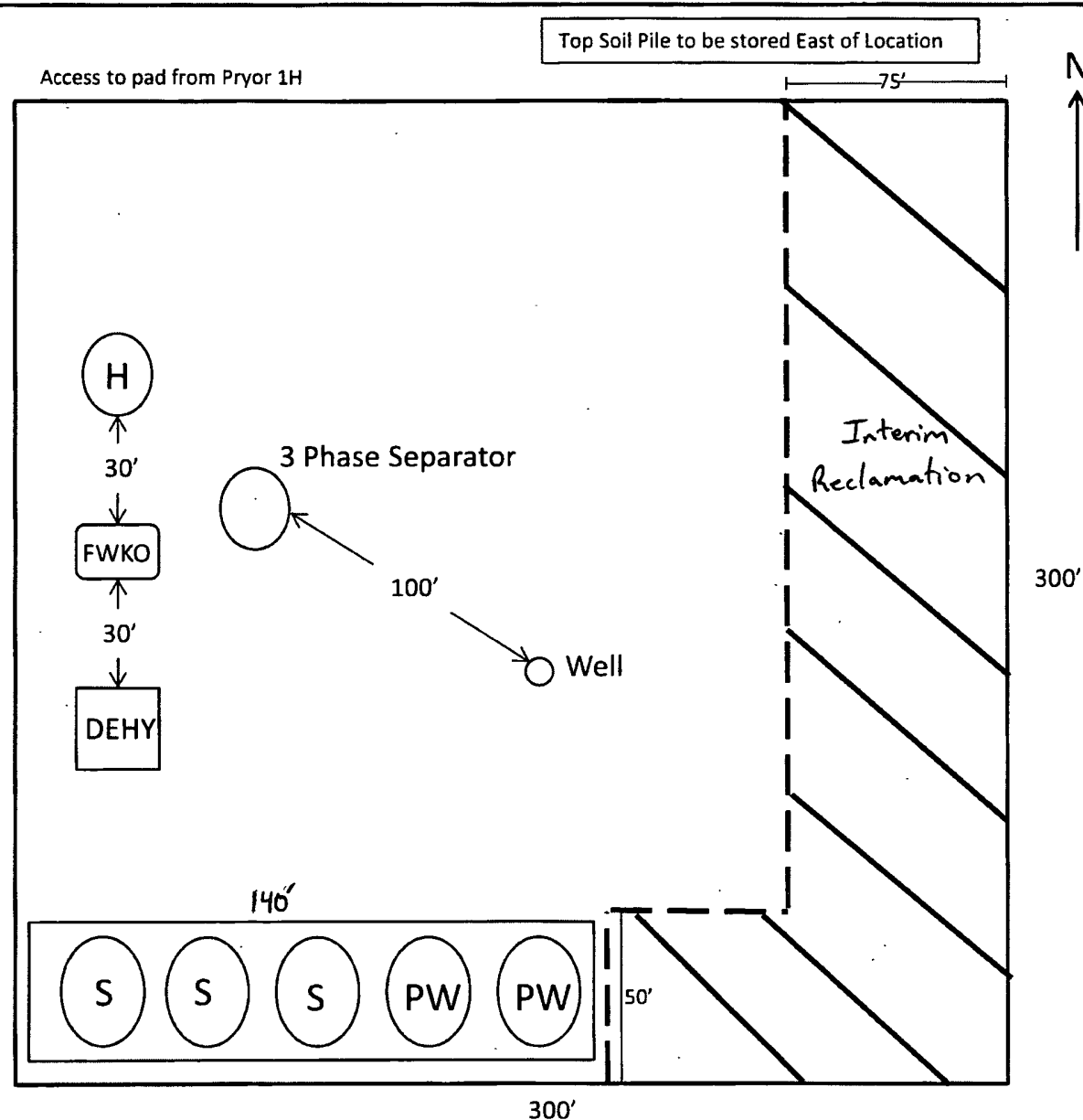
## Well Site Layout Exhibit 5

Pryor Federal-State COM 4H  
Sec. 1-T23S-R34E

### Legend

H	Heater Treater
FWKO	Free Water Knock Out
DEHY	Dehydrator
S	Stock Tank
PW	Production Water Tank

\* Not drawn to scale



TN  
11/6/12