

## BTA OIL PRODUCERS LLC HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

Attachment to APD BTA Oil Producers, LLC Mesa 8105 JV-P #28H Sec 12, T26S, R32E Lea County, NM

### 1. HYDROGEN SULFIDE TRAINING

HOBBS OCD

All personnel, whether regularly assigned, contracted, or employed on aNOV 3 0 2015 unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- a. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S).
- The proper use and maintenance of personal protective equipment and life support systems.
- c. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- a. The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

### 2. H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S. If H2S greater than 100 ppm is encountered in the gas stream we will shut in and install H2S equipment.

- a. Well Control Equipment:
  - Flare line.
  - Choke manifold with remotely operated choke.
  - Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
  - Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.
- Protective equipment for essential personnel:
   Mark II Surviveair 30-minute units located in the dog house and at briefing areas.
- c. H2S detection and monitoring equipment:
  - 2 portable H2S monitor positioned on location for best coverage and

response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.

- d. Visual warning systems: Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.
- Mud Program:
   The mud program has been designed to minimize the volume of H2S circulated to the surface.
- f. Metallurgy: All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
- g. Communication:
   Company vehicles equipped with cellular telephone.

BTA OIL PRODUCERS LLC has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore, we do not believe that an H2S contingency plan is necessary.

### WARNING

# YOU ARE ENTERING AN H<sub>2</sub>S AREA AUTHORIZED PERSONNEL ONLY

- 1. BEARDS OR CONTACT LENSES NOT ALLOWED
- 2. HARD HATS REQUIRED
- 3. SMOKING IN DESIGNATED AREAS ONLY
- 4. BE WIND CONSCIOUS AT ALL TIMES
- 5. CK WITH BTA OIL PRODUCERS LLC FOREMAN AT MAIN OFFICE

BTA OIL PRODUCERS LLC

1-432-682-3753

Well pad will be 400' X 440' with cellar in center of pad BTA OIL PRODUCERS LLC Terrain: Shinnery Sand Hills H<sub>2</sub>S Equipment Schematic **Briefing Area** w/SCBA  $z \in$ Racks Pipe Company Representative's Trailer Condition Sign Location Entry H2S Sensor @ Flowline 150' Buried Flare Line Cat Walk **Drig Separator** 5 Escape Flare pit Top Doghouse Rig Floor Packs Manifold Choke Transfer Pump Primary Briefing Area w/SCBA Centrifuge or Flow line -Monitoring Solids Sep. Rig Pad Layout - Ancillary Facilities Sec 12, T26S, R32E Shaker Pit Panel H<sub>2</sub>S 1- on rig floor 1- under substructure Windstock on H2S Sensors 20' pole Steel pits Lea County, NM Mud Pumps Water Tanks 1 Direction in SENM Prevailing Wind Roll Off Cutting Storage Windstock on Containers on Tanks Fluid 20' pole Tracks

COP 2

BTA Oil Producers, LLC Mesa 8105 JV-P #28H



#### **OPERATOR CERTIFICATION**

Mesa 8105 JV-P #28H
UL -A-, Sec. 12, T26S, R32E Surface
330' FNL & 210' FEL
UL -A-, Sec. 12, T26S, R32E Bottom
230' FNL & 410' FEL
Lea County, New Mexico

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 USC 1001 for the filing of false statements. Executed this 23<sup>rd</sup> day of April, 2015.

Signed: Kayla Molomnell

Printed Name: Kayla McConnell Position: Regulatory Analyst

Address: 104 S Pecos, Midland, TX 79701

Telephone: (432) 682-3753

Field Representative Nick Eaton, Drilling Manager

E-mail: kmcconnell@btaoil.com