State of New Mexico
Energy, Minerals and Natural Resources Department

BY ELECTRONIC MAIL

April 11, 2025

Katy Reddell
BTA Oil Producers, LLC
104 S. Pecos
Midland, TX 79701
kreddell@btaoil.com

RE: Notice of an Administratively Complete Hydrogen Sulfide Contingency Plan, BTA Oil Producers, LLC, Lost Mine Central Tank Battery, Lea County New Mexico

Dear Ms. Reddell,

The New Mexico Energy, Minerals and Natural Resource Department's Oil Conservation Division (OCD) has reviewed the Hydrogen Sulfide (H_2S) Contingency Plan submitted to the OCD on March 25, 2025, by BTA Oil Producers, LLC (BTA) for the Lost Mine Central Tank Battery located in Lea County, New Mexico. The submitted H_2S Contingency Plan includes all content components as required by 19.15.11 NMAC; therefore, the OCD has determined that the submitted H_2S Contingency Plan is administratively complete.

Please be advised that OCD's acceptance of this plan does not relieve BTA of responsibility should its operations fail to adequately detect, investigate, and/or undertake corrective actions to prevent or stop a hydrogen sulfide release. In addition, OCD's acceptance does not relieve BTA of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Please do not hesitate to contact me at (505) 709-5149 or via email should you have any questions.

Respectfully,

Joel Stone

Joel Stone
Environmental Scientist & Specialist
joel.stone@emnrd.nm.gov

Hydrogen Sulfide (H2S) Contingency Plan

Lost Mine Central Tank Battery

N-26-20S-35E

150’ FNL & 150’ FEL

Lat: 32.539277’ N (NAD83)

Long: 103.429581 W

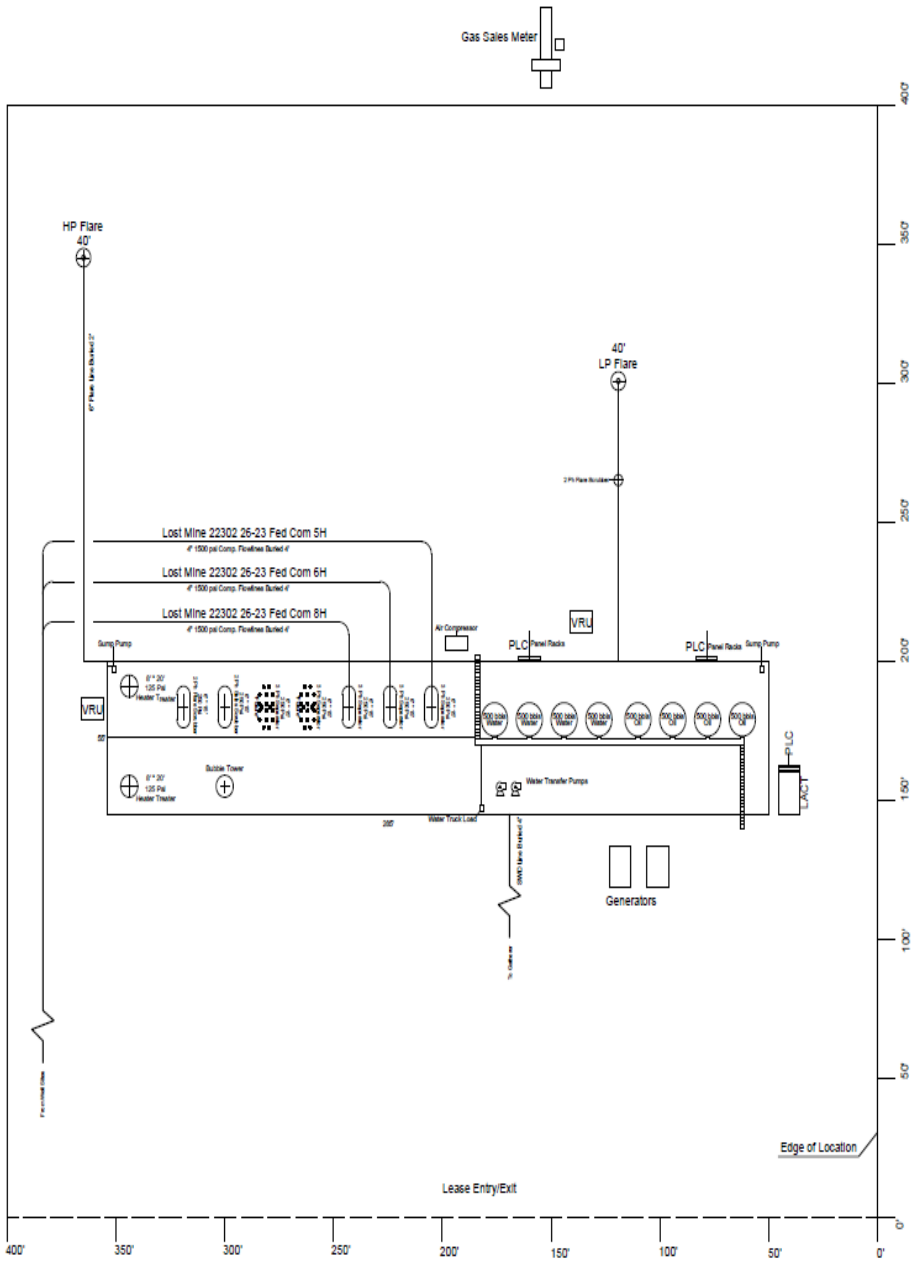
Lea County, NM

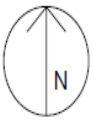
BTA Oil Producers, LLC

104 S. Pecos

Midland, TX 79701

Battery Site Diagram

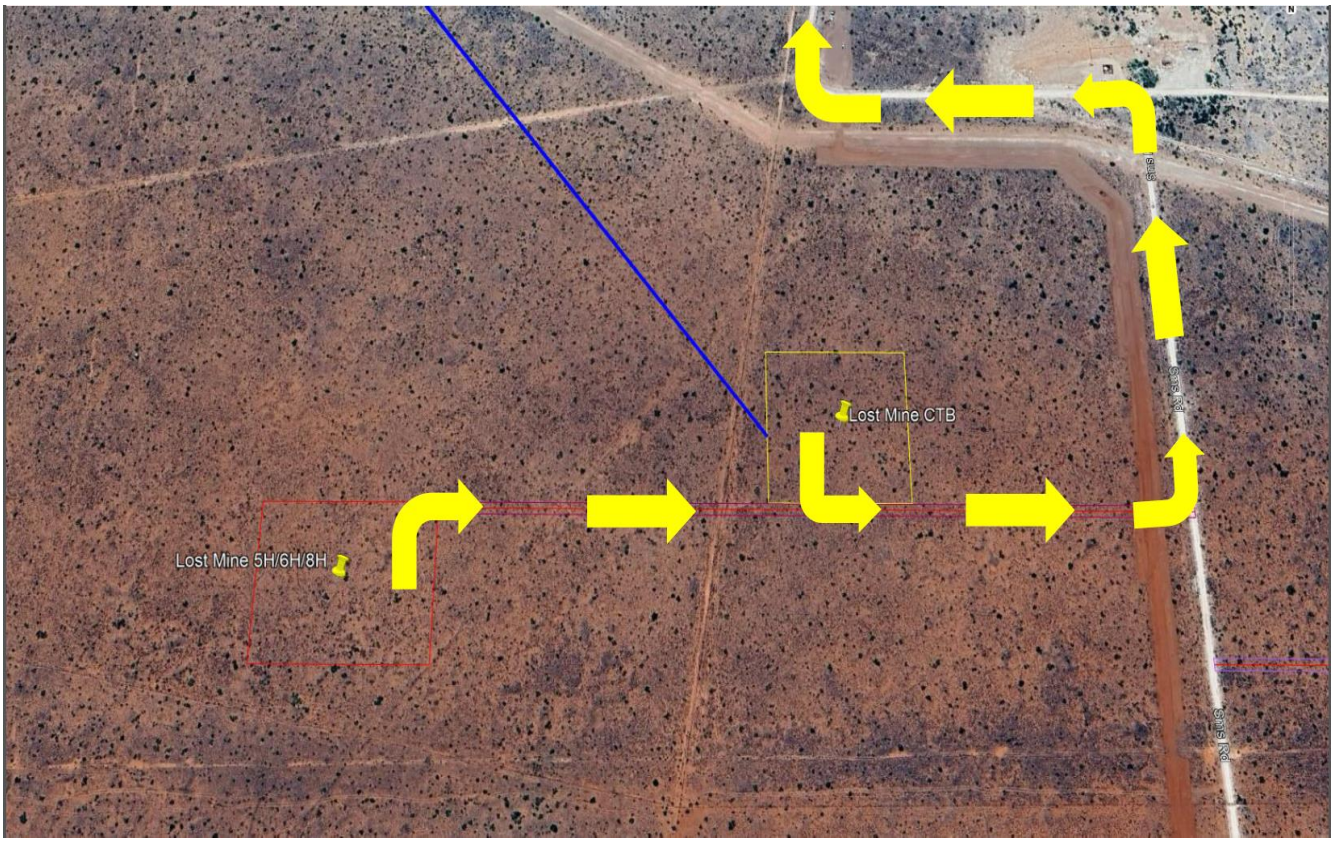




Lost Mine 22302 26-23 Fed Com CTB
Site Plan
32.539277, -103.429581
Sec. 26, T-20-S, R-35-E, Lea Co, NM

NJS 9/5/2024

Battery Escape Routes



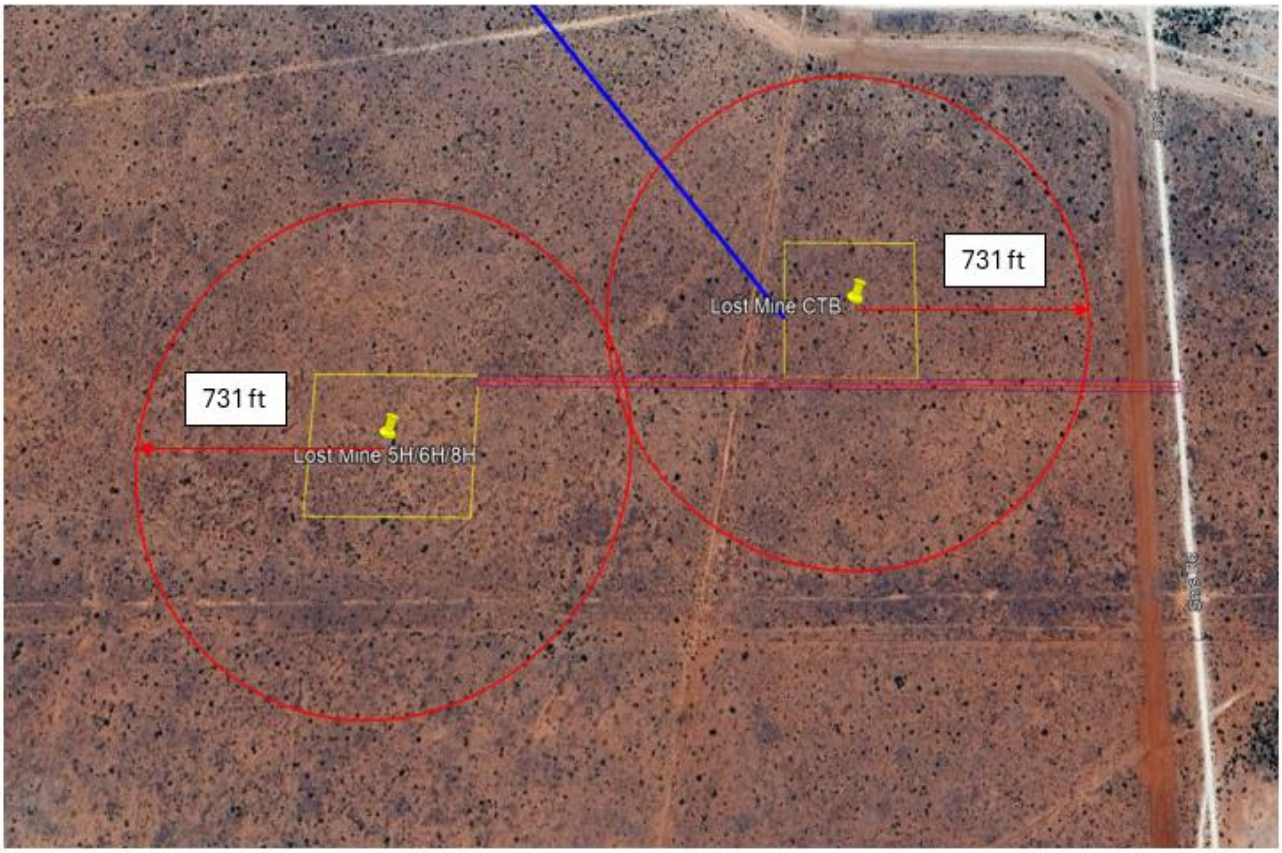
Escape

Person(s) will escape upwind and crosswind of potential gas exposure in the event of an uncontrolled release of gas. Escape can be facilitated from the location entrance road indicated above. Once outside the ROE, Person(s) should enforce a blockade to discourage anyone from entering the ROE.

Affected Roads include – None

ROE Determination here (731’ @ 100ppm & 334’ @ 500ppm)

100 PPM ROE



ROE Determination here 731' @ 100 ppm

Affected Public Areas – None

Affected Public Roads – None

500 PPM ROE

ROE Determination here 334 @ 500 ppm

Affected Public Areas – None

Affected Public Roads – None

Immediate Action Plan

100 ppm H2S concentration shall trigger activation of this plan.

In the event 100 ppm H2S is released at this location, immediate activation of this plan will commence. The most probable scenario in which 100 ppm or greater concentration of H2S is released from this location would be due to equipment failure. In this scenario, equipment such as separators, heaters, or facility flowlines would fail to contain the component streams produced by the wellbore. A sudden failure of the equipment will produce a pressure and temperature drop of the component stream that could rapidly release H2S entrapped in the component streams to the atmosphere. Immediate detection of such a failure would be captured by the permanent H2S sensors on location. These sensors will trigger alarms and immediately notify BTA personnel of the breach. The wells feeding this facility have wellhead ESD's (Emergency Shut Down) and will be activated in a H2S emergency event. These ESD's will limit the volume of H2S being released to the maximum extent possible. In the event an ESD device fails, prolonged concentration or increased concentration of H2S could exist until the ESD and failed equipment components have been repaired.

Roles and Responsibilities

In the event of a release of gas containing H2S;

• BTA employed first responder(s) must:

- Vacate the area immediately if an alarm is activated.
- Perform a headcount to ensure all personnel onsite are accounted.
- Alert BTA field management to initiate emergency response.
- Be prepared to assist fellow workers, while making sure the correct emergency procedures are followed. **Do not take unnecessary risks when rescuing or assisting a fellow worker.**
- If a rescue attempt is deemed safe, move any exposed person to fresh air at once. If breathing has stopped, perform CPR per first aid training.
- Proceed to the designated emergency muster point outside 100 ppm ROE.
- Isolate the area and prevent entry by other people into the 100 ppm ROE.

• BTA Field Management must:

- If the site has a person or person's exposed and needing medical attention, contact EMS and provide following coordinates:
  - **GPS: 32.539277', -103.429581**
- Ensure all ESD's on wellheads going to site are initiated and shut.
- Contact all team members, 3rd party contractors or any other potentially exposed people to stay clear until notified.

- Notify BTA to Implement full Emergency Action Plan Initiation:
  - BTA Office 432-682-3753
  - Kevin Jones (432-664-5452)
  - Nathan Sirgo (432-813-9633).
- Provide updates to BTA Management as new information is received.

BTA Management must:

- Contact NM Local and State authorities for mass notification of the H2S release to the public and shut down affected roads if applicable.
- Coordinate with Local and State authorities in addition to BTA personnel on how to effectively contain the release.
- Monitor and supervise all aspects of the containment operation and H2S Contingency Plan until the area is deemed Safe for Re-entry.

Emergency Procedures

Prior to attempting to reenter the site to contain the release, all responders must:

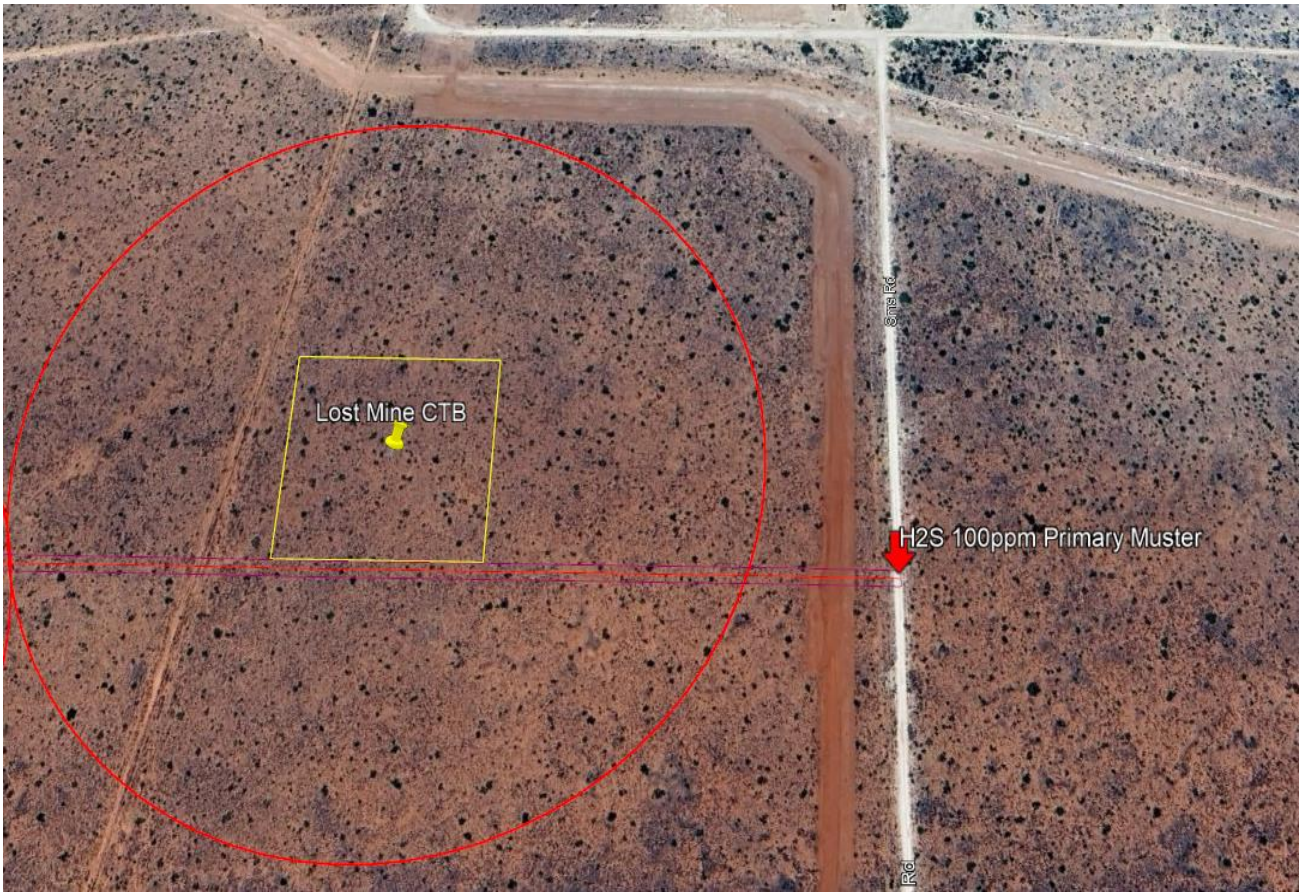
- BTA Field Management approval to reenter prior to work commence.
- Any person returning to the facility will be required to wear an SCBA or SAR mask connected to air supply at all times.
- A BTA Management approved person will remain on standby for the duration of the job. The standby person will be ready to enter by wearing a SAR mask connected to air supply or an SCBA.
- If an air cascade system with SAR's are utilized, a third person will be required to manage the cascade system to ensure proper breathing air is supplied.
- All entrants and standby personnel will be required to be trained in:
  - H2S Training.
  - Respiratory Protection Training.
  - Cascade System & SCBA Training.
  - H2S Detection Device Training (if applicable)
- If an air cascade system with SAR's are utilized, a third person will be required to manage the cascade system to ensure proper breathing air is supplied.

After successful repair or containment of the release. BTA will utilize the permanent facility H2S Sensors to monitor ambient air. Once facility sensors indicate H2S levels have dropped below 10 ppm, a 3rd Party safety company representatives will use handheld Multi-Gas Detectors to perform a more detailed examination of the ambient air in the area of exposure. After 3 consecutive Multi-Gas examinations of 10 ppm or less the location will be determined safe for re-entry.

Emergency Response Muster Point

Upon activation of this plan, BTA's Lost Mine entrance road will be the primary muster point and on-site coordination headquarters for all personnel involved in containing the release.

Lost Mine Primary Muster GPS: **32.5392906,-103.4263484**



Ignition of Gas Source

Should control of the source be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (S02). 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.

ESD (Emergency Shutdown Procedures)

ESD devices will be installed on each wellhead for each well associated with this Battery. These ESD devices will be triggered if H2S Concentration **exceeds 50 ppm** at any sensor at this location. A full facility ESD and all wellhead ESD's will trigger. A full facility ESD will constitute powering down all equipment and setting automated valves to a "Closed" state to isolate the potential release to the maximum extent possible. In addition, wellheads will have master and wing valves located on the production tree manually shut as soon as BTA first responders arrive, and it is deemed safe to do so.

Contacting Authorities

BTA 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. **The call list of essential and potential responders, on page 13 of this plan, has been prepared for use during a release.** BTA's response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER). Additionally, pursuant to 19.15.11.16 NMAC, MOC will submit a full report of the incident to the NMOCD using Form C-141 no later than 15 days following the release.

Plan Reviews & Amendments

BTA will conduct testing monthly to determine the concentration of H2S present at this location. New ROEs will be calculated, and the H2S Contingency Plan will be amended as the ROE changes. Once ROEs decrease to the extent the H2S Contingency Plan is no longer required by 19.15.11 NMAC, BTA will conduct yearly testing to monitor H2S Concentration levels. During each testing period BTA will also review the subjects in this plan for material changes and make the appropriate amendments. Additionally, any new provisions added or amendments to the plan supplied by NMOCD will be made effective as they are received by BTA.

Annual Communication with Local Authorities

On an annual basis, BTA will prepare this H2S Contingency Plan and file it with the appropriate local authorities' emergency planning committee and the state emergency response commission. BTA will also review and provide/update the names, addresses and telephone numbers of the point of contact at this time.

Hazards and Characteristics of H2S and S02

Hydrogen Sulfide Gas (H2S) is a potentially lethal gas that can cause rapid unconsciousness, and death in high enough concentrations. H2S is a colorless gas and is only able to be smelt in low concentrations (often smelling like Rotten Eggs). At higher concentrations H2S paralyzes the olfactory nerve and an individual is no longer able to smell the gas. In addition, H2S is highly flammable and explosive, with an explosive range of 4.3 to 45 percent. The byproduct of burning H2S gas is Sulfur Dioxide (SO2) which is another gas with deadly characteristics. SO2 is another potentially lethal gas that can cause death in high enough concentrations. Like H2S, SO2 is a colorless gas. It also targets the respiratory system and can cause nose, throat, and lung irritation. S02 reacts violently with Oxidizing Agents and contact with oxidizing agents should be avoided. In the presence of moisture or water SO2 can turn into Sulfuric Acid. Caution should be used when attempting to extinguish SO2 with water.

Both H2S and SO2 are considered Poisonous Gases!!!

Characteristics of H2S and S02					
Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H2S	1.189 (Air=1)	10 ppm	100 ppm/hr	500 ppm
Sulfur Dioxide	SO2	2.21 (Air=1)	2 ppm	100 ppm	1,000 ppm

H2S Concentration (ppm)	Symptoms/Effects
0.01-5	Odor threshold (when rotten egg smell is first noticeable to some).
5-10	Prolonged exposure may cause nausea, tearing of the eyes, headaches or loss of sleep.
10-100	Possible fatigue, loss of appetite, headache, irritability, poor memory, dizziness.
100-500	Coughing, eye irritation, Loss of smell (olfactory fatigue or paralysis). Death may occur after 48 hours.
500-1000	Staggering, collapse in 5 minutes. Death after 30-60 minutes.
1000-2000	Instant death

H2S Production Operation Plan

HYDROGEN SULFIDE (H2S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in accordance to their company's H2S safety policy in the following areas prior to commencing production operations on any well associated with this tank battery and the tank battery itself:

- The hazards and characteristics of hydrogen sulfide (H2S)
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- 4. The proper techniques for first aid and rescue procedures.

There will be an initial training session prior to any field work to be completed during BTA Employee Onboarding. Initial training will also be required for any current employees currently working in for transferred into a known H2S Area prior to field work in that area. The initial training session shall include a review of the BTA H2S Safety Standard and area site specific H2S Emergency Contingency plan. There will be annual training to refresh all personnel, whether regularly assigned, contracted, or employed on an unscheduled basis as part of their company's safety policies. Personnel will receive training from a qualified instructor in the areas listed above and complete a written H2S worksheet. Semiannually, on-site drills and release simulations will be conducted for all personnel, whether regularly assigned, contracted, or employed on an unscheduled basis at this location. Drills and simulations will include training in the responsibilities and duties of essential personnel.

HYDROGEN SULFIDE OPERATIONAL REQUIREMENTS

Note: All H2S safety equipment and systems will be installed, tested, and operational before initial well production.

Well Control Equipment

- ESD Valve (Automated)
- Manual Valves

Protective equipment for essential personnel:

- Battery will be supplied with rescue packs, supplied air vessels, and escape packs.
- 30-minute SCBA units located at briefing areas, as indicated on well site diagram.

- As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.
- BTA personnel that regularly visit this location will have supplied air vessels, rescue packs, and escape packs on their BTA provided company vehicle.

H2S detection and monitoring equipment:

- Permanent H2S monitors positioned on location for best coverage and response. These units have warning lights which activate when H2S levels reach 10 ppm and audible sirens which activate at 15 ppm. Sensor locations:
  - Tanks
  - Heaters
  - Separators
  - Wellhead

Visual warning systems:

- Wind direction indicators as shown on well site diagram
- Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Signs shall contain the words "Poison Gas". Bilingual signs will be used when appropriate.

Inspection/Calibration of Safety Equipment

- Monthly
  - Personal H2S monitor
  - SCBA (& before each use)
  - Rescue Packs/Escape Packs
  - Supplied Air Vessels
  - Cascade systems
- Every 3 Months
  - Permanent H2S Sensors on location

BTA Oil Producers Company Contact List

BTA Employees

Site Foreman – Daniel Rosa	432-238-4408
Production Manager – Nathan Sirgo	432-813-9633
Superintendent- Kevin Jones	432-664-5452
BTA Office	432-682-3753

Hobbs (Lea County)

State Police	575-392-5588
City Police	575-397-9265
Sherriff's Office	575-393-2515
Ambulance/Fire Department	575-397-9308
LEPC (Local Emergency Planning Committee)	575-393-2870
Lea Regional Hospital	575-392-6581

Carlsbad (Eddy County)

State Police	575-885-3137
City Police	575-885-2111
Sherriff's Office	575-887-7551
Ambulance/Fire Department	575-885-2111
LEPC (Local Emergency Planning Committee)	575-887-3798
Carlsbad Medical Center	575-887-4100

Government Agencies

New Mexico Oil Conservation Division (Santa Fe)	575-476-3441
New Mexico Oil Conservation Division (Hobbs)	575-241-7063
US Bureau of Land Management (BLM)	575-887-6544
Air Quality Bureau, Santa Fe, NM	575-827-1494
NM Emergency Response Commission (Santa Fe)	505-476-9600
24HR #	505-827-9126
National Emergency Response Center (DC)	800-424-8802

Other Emergency Services

Wild Well Control	281-784-4700
Native Air – Emergency Helicopter – Hobbs	575-392-6429
Flight For Life – Lubbock, TX	806-743-9911
Aerocare – Lubbock, TX	575-842-4433

Appendix

ROE Calculation – Lost Mine

Parameters and Equations:

100 ppm ROE calculation (as per 19 NMAC 15.11.7.K.1):

$$X_{100\ ppm} = (1.589 * C_{H2S} * Q)^{0.6258}$$

500 ppm ROE calculation (as per 19 NMAC 15.11.7.K.2):

$$X_{500\ ppm} = (0.4546 * C_{H2S} * Q)^{0.6258}$$

X = radius of exposure (ft)

C_{H2S} = decimal equivalent of the mole or volume fraction of H2S present

Q = Daily Facility throughput (SCF/D)

Calculation Date 2/27/2025

100 ppm Calculation:

$$X_{100\ ppm} = (1.589 * 0.013 * 1{,}828{,}000)^{0.6258}$$

$X_{100\ ppm}$ = 731 ft

500 ppm Calculation:

$$X_{500\ ppm} = (0.4546 * 0.013 * 1{,}828{,}000)^{0.6258}$$

$X_{500\ ppm}$ = 334 ft

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 445270

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 445270
	Action Type: [UF-H2S] H2S Contingency Plan (H2S Plan)

CONDITIONS

Created By	Condition	Condition Date
joel.stone	None	4/11/2025