MARBOB ENERGY CORPORATION

HYDROGEN SULFIDE (H_2S) CONTINGENCY PLAN
FOR DRILLING/COMPLETING/WORKOVER/FACILITY
WITH THE EXPECTATION OF H_2S IN EXCESS OF 100 PPM

Compadres Fee #1
NEW WELL DRILL
2310' FNL & 2310' FEL
SECTION 4-T22S-R27E
EDDY COUNTY, NEW MEXICO

This well/facility is not expected to have H_2S, but due to the sensitive location, the following is submitted as requested.

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GENERAL H_2S EMERGENCY ACTIONS

In the event of an H_2S emergency, the following plan will be initiated:

1) All personnel will immediately evacuate to an up-wind and if possible up-hill "safe area".

2) If for any reason a person must enter the hazardous area, they must wear a SCBA (self contained breathing apparatus).

3) Always us the "buddy system".

4) Isolate the well/problem if possible.

5) Account for all personnel.

6) Display the proper colors warning all unsuspecting personnel of the danger at hand.

7) Contact the company representative as soon as possible if not at the location (use the enclosed call list as instructed).

At this point the company representative will evaluate the situation and coordinate the necessary duties to bring the situation under control, and if necessary, the notification of emergency response agencies and residents.

EMERGENCY PROCEDURES FOR AN UNCONTROLLABLE RELEASE OF H_2S

1) All personnel will don the self contained breathing apparatus.

2) Remove all personnel to the "safe area" (always use the "buddy system").

3) Contact company representative if not on location.

4) Set in motion the steps to protect and/or remove the general public to any upwind "safe area". Maintain strict security and safety procedures while dealing with the source.

5) No entry to any unauthorized personnel.

6) Notify the appropriate agencies:
   City Police – City streets
   State Police – State Roads
   County Sheriff – County Roads

7) Call the NMOCD.

If at this time the supervising person determines the release of H_2S cannot be contained to the site location and the general public is in harms way, he will immediately notify public safety personnel.

EMERGENCY CALL LIST

	Office	Mobile	Home
Marbob Energy Corp.	505-748-3303		
Sheryl Baker	505-748-3303	505-748-5489	505-748-2396
Johnny C. Gray	505-748-3303	505-748-5983	505-885-3879
Raye Miller	505-748-3303	505-513-0176	505-746-9577
Dean Chumbley	505-748-3303	505-748-5988	505-748-2426

EMERGENCY RESPONSE NUMBERS
Eddy County, New Mexico

State Police	505-748-9718
Eddy County Sheriff	505-746-2701
Emergency Medical Services (Ambulance)	911 or 505-746-2701
Eddy County Emergency Management (Harry Burgess)	505-887-9511
State Emergency Response Center (SERC)	505-476-9620
Carlsbad Police Department	505-885-2111
Carlsbad Fire Department	505-885-3125
New Mexico Oil Conservation Division	505-748-1283
Indian Fire & Safety	800-530-8693
Halliburton Services	800-844-8451

PROTECTION OF THE GENERAL PUBLIC/ROE

In the event greater than 100 ppg H_2S is present, the ROE (Radius of Exposure) calculations will be done to determine if the following is warranted:

- 100 ppm at any public area (any place not associated with this site)
- 500 ppm at any public road (any road which the general public may travel)
- 100 ppm radius of 3000' will be assumed if there is insufficient data to do the calculations, and there is a reasonable expectation that H_2S could be present in concentrations greater than 100 ppm in the gas mixture.

Calculation for the 100 ppm ROE:

$X = [(1.589)(concentration)(Q)]\ (0.6258)$

Calculation for the 500 ppm ROE:

$X = [(0.4546)(concentration)(Q)]\ (.06258)$

(H_2S concentrations in decimal form)
10,000 ppm + = .01
1,000 ppm + = .001
100 ppm + = .0001
10 ppm + = .00001

EXAMPLE: If a well/facility has been determined to have 150 ppm H_2S in the gas mixture and the well/facility is producing at a gas rate of 200 MCFD then:

ROE for 100 ppm $X=[(1.589)(.00010)(200,000)]\ (0.6258)$
$X=8.8'$
ROE for 500 ppm $X=[(.4546)(.00050)(200,000)]\ (0.6258)$
$X=10.9'$

These calculations will be forwarded to the appropriate NMOCD district office when applicable.

PUBLIC EVACUATION PLAN

When the supervisor has determined that the general public will be involved, the following plan will be implemented.

1) Notification of the emergency response agencies of the hazardous condition and implement evacuation procedures.

2) A trained person in H_2S safety shall monitor with detection equipment the H_2S concentration, wind and area of exposure. This person will determine the outer perimeter of the hazardous area. The extent of the evacuation area will be determined from the data being collected. Monitoring shall continue until the situation has been resolved. All monitoring equipment shall be UL approved for use in Class I Groups A, B, C & D, Division I hazardous locations. All monitors will have a minimum capability of measuring H_2S, oxygen, and flammable values.

3) Law enforcement shall be notified to set up necessary barriers and maintain such for the duration of the situation as well as aid in the evacuation procedure.

4) The company representative shall stay in communication with all agencies throughout the duration of the situation and inform such agencies when the situation has been contained and the effected area is safe to enter.

PROCEDURE FOR IGNITING AN UNCONTROLLABLE CONDITION

The decision to ignite a well should be a last resort and one, if not both, of the following pertain:

1) Human life and/or property are in danger.

2) There is no hope of bringing the situation under control with the prevailing conditions at the site.

INSTRUCTIONS FOR IGNITION

1) Two people are required. They must be equipped with positive pressure, self contained breathing apparatus and a "D"-ring style, full body, OSHA approved safety harness. Non-flammable rope will be attached.

2) One of the people will be a qualified safety person who will test the atmosphere for H_2S, oxygen and LFL. The other person will be the company representative.

3) Ignite up-wind from a distance no closer than necessary. Make sure that where you ignite from has the maximum escape avenue available. A 25 mm flare gun shall be used, with a +-500' range to ignite the gas.

4) Prior to ignition, make a final check for combustible gases.

5) Following ignition, continue with the emergency actions and procedures as before.

REQUIRED EMERGENCY EQUIPMENT

1) Breathing Apparatus

- Rescue Packs (SCBA) – 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- Work/Escape Packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.

2) Signage and Flagging

- One Color Code Condition Sign will be placed at the entrance to the site reflecting the possible conditions at the site.
- A Colored Condition flag will be on display reflecting the condition at the site at that time.

3) Briefing Area

- Two perpendicular areas will be designated by signs and readily accessible.

4) Wind Socks

- Two windsocks will be placed in strategic locations, visible from all angles.

5) H_2S Detectors and Alarm

- The stationary detector with three (3) sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible alarm @ 15 ppm. Calibrate a minimum of every 30 days or as needed. The three sensors will be placed in the following places: (Gas sample tubes will be stored in the safety trailer)

  - Rig floor
  - Bell nipple
  - End of flow line or where well bore fluid is being discharged

6) Auxiliary Rescue Equipment

- Stretcher
- Two OSHA full body harnesses
- 100' of 5/8" OSHA approved rope
- One 20 lb. Class ABC fire extinguisher
- Communication via cell phones on location and vehicles on location

USING SELF-CONTAINED BREATHING AIR EQUIPMENT (SCBA)

1) SCBA should be worn when any of the following are performed:

- Working near the top or on top of a tank.
- Disconnecting any line where H_2S can reasonably be expected.
- Sampling air in the area to determine if toxic concentrations of H_2S exist.
- Working in areas where over 10 ppm of H_2S has been detected.
- At any time there is a doubt of the level of H_2S in the area.

2) All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous location.

3) Facial hair and standard eyeglasses are not allowed with SCBA.

4) Contact lenses are never allowed with SCBA.

5) Air quality shall be continuously checked during the entire operation.

6) After each use, the SCBA unit shall be cleaned, disinfected, serviced and inspected.

7) All SCBA shall be inspected monthly.

RESCUE & FIRST AID FOR VICTIMS OF H_2S POISONING

- Do not panic.
- Remain calm & think.
- Get on the breathing apparatus.
- Remove the victim to the safe breathing area as quickly as possible, upwind and uphill from source or cross wind to achieve upwind.
- Notify emergency response personnel.
- Provide artificial respiration and/or CPR as necessary.
- Remove all contaminated clothing to avoid further exposure.
- A minimum of two (2) personnel on location shall be trained in CPR and First Aid.

H_2S TOXIC EFFECTS

H_2S is extremely toxic. The acceptable ceiling for eight hours of exposure is 10 ppm, which is .001% by volume. H_2S is approximately 20% heavier than air (Sp.Gr=1.19 / Air=1) and colorless. It forms an explosive mixture with air between 4.3% and 46.0%. By volume hydrogen sulfide (H_2S) is almost as toxic as hydrogen cyanide and is 5-6 times more toxic than carbon monoxide.

Various Gases

Common Name	Chemical Abbrev.	Sp. Gr.	Threshold Limits	Hazardous Limits	Lethal Concentration
Hydrogen Sulfide	H_2S	1.19	10 ppm 15 ppm	100 ppm/hr	600 ppm
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/hr	300 ppm
Sulfur Dioxide	SO_2	2.21	2 ppm	N/A	1000 ppm
Chlorine	CL_2	2.45	1 ppm	4 ppm/hr	1000 ppm
Carbon Monoxide	CO	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	CO_2	1.52	5000 ppm	5%	10%
Methane	CH_4	0.55	90,000	Combustible @ 5%	N/A

1 Threshold limit – Concentrations at which it is believed that all workers may be repeatedly exposed, day after day, without adverse effects
2 Hazardous limit – Concentration that may cause death
3 Lethal concentration – Concentration that will cause death with short-term exposure
4 Threshold limit – 10 ppm – NIOSH guide to chemical hazards
5 Short-term threshold limit

PHYSICAL EFFECTS OF HYDROGEN SULFIDE (H_2S)

CONCENTRATIONS		PHYSICAL EFFECTS
.001%	10 ppm	Obvious and unpleasant odor. Safe for 8 hr. exposure
.005%	50 ppm	Can cause some flu-like symptoms and can cause pneumonia
.01%	100 ppm	Kills the sense of smell in 3-15 minutes. May irritate eyes and throat
.02%	200 ppm	Kills the sense of smell rapidly. Severely irritates eyes and throat. Severe flu-like symptoms after 4 or more hrs. May cause lung damage and/or death.
.06%	600 ppm	Loss of consciousness quickly, death will result if not rescued promptly.