

District I
1625 N. French Dr , Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
May 27, 2004

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address THOMPSON, J. CLEO P.O. BOX 12577 ODESSA, TX 79768		² OGRID Number 11181
³ Property Code 36973	⁵ Property Name Gainer 22	⁴ APL Number 30-025-38792
⁹ Proposed Pool 1 CROSSROADS DEVONIAN SOUTH		⁶ Well No 001
¹⁰ Proposed Pool 2		

7 Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/Westline	County
K	22	10S	36E		1677.9'	SOUTH	1697.8'	WEST	LEA

8 Proposed Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/Westline	County

Additional Well Information

¹¹ Work Type Code N	¹² Well Type Code G	¹³ Cable/Rotary R	¹⁴ Lease Type Code P	¹⁵ Ground Level Elevation 4010'
¹⁶ Multiple N	¹⁷ Proposed Depth 12850	¹⁸ Formation DEVONIAN	¹⁹ Contractor FORSTER	²⁰ Spud Date 04/01/2008
Depth to Groundwater 75'		Distance from nearest fresh water well > 1 MILE		Distance from nearest surface water > 1 MILE
Pit. Liner Synthetic <input checked="" type="checkbox"/> 12 mil thick Clay <input type="checkbox"/>		Pit Volume 9000 bbls		Drilling Method
Closed-Loop System <input type="checkbox"/>		Fresh Water <input checked="" type="checkbox"/> Brine <input checked="" type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>		

21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17.5	13.375	48	500	500	SURFACE
11	8.625	32	5100	1000	SURFACE
7.875	5.5	17	12850	2200	4000

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

1. DRILL 17-1/2" TO 500'. SET 13-3/8" CSG. CEMENT TO SURFACE WITH 425 SXS.
2. DRILL 11" HOLE TO 5100'. SET 8-5/8" CSG. CEMENT TO SURFACE WITH 1,000 SXS. NU 5000 PSI BOP DOUBLE RAM STACK WITH 3000 PSI ANNULAR PREVENTER
3. DRILL 7-7/8" HOLE TO 12,850'. SET 5-1/2" CSG. CEMENT FROM TD TO 8000'. CEMENT FROM 7000' INTO INT. CSG. WITH CEMENTATION TOOL. (DV TOOL OR FORMATION PACKER)

RECEIVED

**Permit Expires 2 Years From Approval
Date Unless Drilling Underway**

FEB 26 2008

HOBBS OCD

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines <input checked="" type="checkbox"/> , a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input type="checkbox"/> .		OIL CONSERVATION DIVISION	
Printed name: JIM STEVENS		Approved by: <i>Chris Williams</i>	
Title: OPERATIONS MANAGER		Title: OCD DISTRICT SUPERVISOR/GENERAL MANAGER	
E-mail Address: jstevens@jcleo.com		Approval Date: MAY 21 2008 Expiration Date:	
Date: 02/08/2008	Phone: (432)550-8887	CONDITIONS OF APPROVAL Intent to drill ONLY -- CANNOT produce until the Non-Standard Location has been approved by OCD Santa Fe office	

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State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease-4 copies
Fee Lease-3 copies

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

☐ AMENDED REPORT

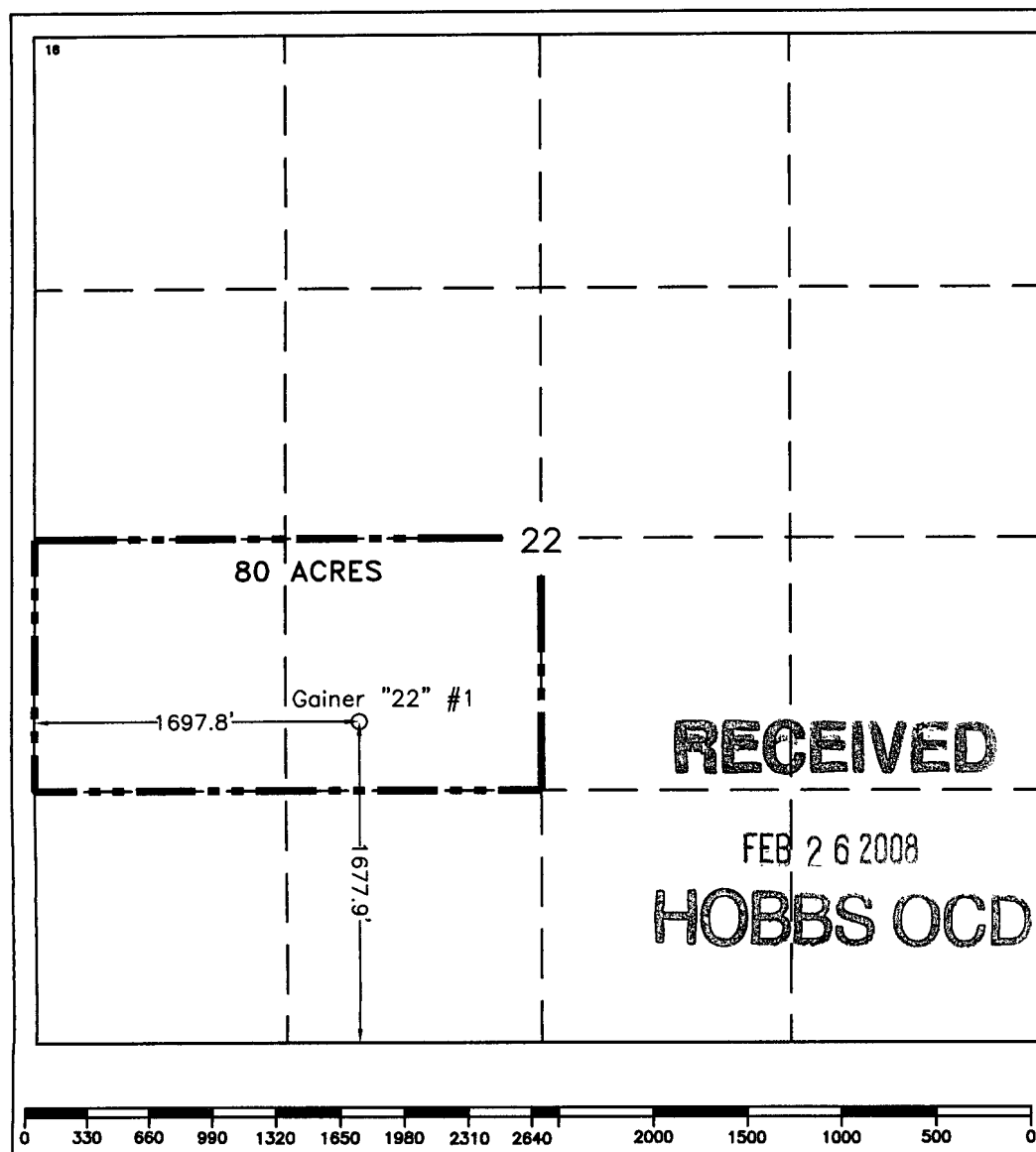
WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-38792		² Pool Code 13560		³ Pool Name Crossroads Devonian South	
⁴ Property Code 36973		⁵ Property Name GAINER "22"			⁶ Well Number 1
⁷ GRID No. 11181		⁸ Operator Name J. CLEO THOMPSON & JAMES CLEO THOMPSON, JR., L.P.			⁹ Elevation 4010'

¹⁰ Surface Location									
UL or lot no. K	Section 22	Township 10-S	Range 36-E	Lot Idn	Feet from the 1677.9'	North/South line South	Feet from the 1697.8'	East/West line West	⁷ County Lea

¹¹ Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	⁷ County
¹² Dedicated Acres 80		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION.



¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.	
Signature <i>Jim Stevens</i>	Date 2/25/08
Printed Name Jim Stevens	
¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.	
Date of Survey 2/7/08	
Signature & Seal of Professional Surveyor: <i>John P. ...</i>	
Certificate No. 7254	

○ = Staked Location • = Producing Well ● = Injection Well ◇ = Water Supply Well ◆ = Plugged & Abandon Well

H₂S CONTINGENCY PLAN

J. Cleo Thompson
Gainer 22 #1
Unit K: Section 22, T10S-R36
1677.9' FSL, 1697.8' FWL
Lea County, NM

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SCOPE

This plan establishes **J. Cleo Thompson** guidelines for all company and contract employees whose duties may involve exposure to hydrogen sulfide gas (H_2S) on the **Gainer 22 #1**. **This well is located 1677.9' FSL & 1697.8' FWL in Unit K, Section 22 of the Township 10-S, Range 36-E of Lea County, New Mexico.** This plan also establishes procedure for isolation of the work site and evacuating the public on the condition that:

- A. There is a release of H_2S that compasses the radius of exposure (ROE) in this plan,
- B. There are persons and/or roads within the ROE and,
- C. There is the endangerment of human or animal life within the ROE.

OBJECTIVE

The objective of the **J. Cleo Thompson Company** is to:

- A. Prevent any and all accidents, and to prevent the uncontrolled release of H_2S into the atmosphere and,
- B. Provide proper evacuation procedures to cope with emergencies and,
- C. Provide immediate and adequate medical attention should in injury occur.

It should be noted that J. Cleo Thompson does not expect there top be any release of H_2S into the atmosphere but has taken the necessary steps to react properly to and control any hazards encountered on any of our facilities.

GENERAL EMERGENCY ACTION

In the event of an emergency, the following action should be initiated,

1. All personnel shall immediately evacuate to an up-wind and up-hill “*safe breathing*” area.
2. Those who must enter the hazard area must wear positive pressure self-contained breathing apparatus and must use other appropriate safety equipment as outlined on page 10.
3. Isolate the well, if possible.
4. Use the “Buddy System” at all times.
5. Account for all personnel and take appropriate action as necessary for personnel safety.
6. Display the appropriate color warning flag to describe the type of emergency.
7. The *J. Cleo Thompson* supervisor will assess the situation and assign duties to various persons to bring the situation under control. The *J. Cleo Thompson* supervisor will assign the notification of local emergency response agencies and residents. Media inquiries are be referred to:
J. Cleo Thompson
325 North St. Paul, Suite 4300
Dallas, Texas 75201

**J. CLEO THOMPSON
EMERGENCY CALL OUT NUMBERS**

NAME	OFFICE NUMBER	CELLULAR NUMBER	HOME NUMBER
Johnnie Holder Drilling Foreman	(432)550-8887	(432)556-9325	(432)363-8054
Jim Stevens Operations Manager	(432)550-8887	(432)664-2917	(432)563-5504
John Hughes Production Foreman	(432)634-8403	(432)661-5313	(806)287-1225

J. Cleo Thompson is aware and will abide by city; county and state burn ban policies.

**Emergency Notification Numbers
Lea County, NM**

<u>Organization or Agency</u>	<u>Phone Number</u>
New Mexico State Police	(505)885-3137
Lea County Sheriff's Department	(505)396-3611
Tatum Sheriff's Department	(505)398-4444
Emergency Medical Service (Ambulance)	911
State Emergency Response Center Max Johnson (Chairman)	(505)476-9620
Tatum Fire Department	911
Bureau Land Management (District II)	(505)234-5972
Oil Conservation Division (District II)	(505)748-1283
National Response Center (NRC)	(800)424-8802
Chemtrec	(800)424-9300
Midland Safety & Health	(432)520-3838

Gainer 22 #1

Neighboring Residents to Gainer 22 #1

NONE

**EMERGENCY PROCEDURES FOR UNCONTROLLABLE RELEASE OF
HYDROGEN SULFIDE GAS (H₂S)**

1. Secure and don self-contained breathing apparatus.
2. Remove all personnel to up-wind and up-hill “safe breathing” zone.
3. Contact all concerned employees and immediate supervisor for instructions.
4. Take steps to protect and/or remove the general public to an upwind area away from source of H₂S.
5. Deny entry to unnecessary personnel.
6. Notify necessary public safety personnel:
 - a. State Police if on or near a **state road**
 - b. Sheriff’s Department if on or near a **county road***(For assistance in the evacuation of the general public and to help maintain roadblocks)*
7. Contact the Bureau of Land Management (BLM)
8. While attempting to control the release, maintain tight security and safety procedures.
9. Use the “Buddy System” when entering any hazardous area.

The responsibility of this plan is with the J. Cleo Thompson supervisor(s) who shall be in complete command during the emergency.

IGNITION PROCEDURES FOR UNCONTROLLABLE WELL CONDITIONS

The decision to ignite the well is the decision of the company supervisor(s). This decision should be made only as a last resort and in a situation where it is determined that:

- Human life and/or property are endangered
- There is no hope of controlling the blowout under the prevailing conditions at the well.

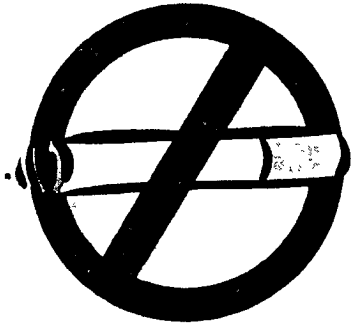
INSTRUCTIONS FOR IGNITING THE RELEASE

1. Two personnel are required for the ignition operation. They **must** wear positive self-contained breathing apparatus and a D-ring style full body safety harness with a non-flammable safety rope attached. **(Must be an OSHA approved body harness)**
2. One (safety) person will test the atmosphere for explosive gases with an approved Triple-range (H₂S, O₂, LFL) monitor.
3. Primary method of ignition shall be with 25mm flare gun with range of approximately 500 feet.
4. Ignite up-wind and do not approach any closer than is warranted.
5. Select a safe ignition site, which offers ultimate egress.
6. Before activating flare gun, check for presence of combustible gas.
7. After ignition, continue emergency action and procedure as before.
8. All unassigned personnel will limit their actions to those directed by the company supervisor.

After the well is ignited, burning H₂S will produce SO₂, which is also highly toxic. **Do not assume the area is safe after the well is ignited.**

A NO SMOKING POLICY shall be strictly enforced on location at all times.

DANGER



NO SMOKING

EMERGENCY EQUIPMENT REQUIREMENTS

1. Respiratory Protection

- **Rescue Units (SCBA's):** One (1) unit shall be placed at each briefing area and 2 shall be stored in the safety trailer.
- **Work/Escap Units:** Four (4) units shall be stored on the rig floor connected to the safety trailer with sufficient hose to allow workers to adequately perform duties with minimal restriction.
- **Emergency Escap Units:** Four (4) units shall be stored in the top dog house for emergency evacuation purposes.

2. Signs and Flags

- **One (1) Condition Sign shall be placed at location entrance with the following language:**

**DANGER
H₂S**

POTENTIAL DANGER (GREEN)

MODERATE DANGER (YELLOW OR ORANGE)

EXTREME DANGER (RED)

- **Condition flags shall be displayed at the sign in one of the designations:**

Green/normal conditions

Yellow or Orange / potential danger

Red/danger
H₂S Present

- 3. Briefing Area:** Two (2) briefings areas, designed by signs, shall be located perpendicular to each other and be easily visible and readily accessible.
- 4. Windsocks:** Two (2) windsocks shall be strategically placed where they are easily visible from all points.

5. Hydrogen Sulfide Detectors and Alarms:

- One (1) stationary H₂S monitor with three sensors shall be located on the rig in the top dog house. The H₂S monitor shall be calibrated to alarm at 10PPM for the low alarm (visual alarm) and 15 PPM for the high alarm (audible alarm). Calibrations shall be checked every 30 days or as needed. The sensors shall be located as follows:

#1 – Rig Floor

#2 – Bell Nipple

#3 – Flow line or where the well bore fluid is discharged

- A gas sampling pump, with detector tubes capable of measuring H₂S gas, shall be located in the safety trailer.

6. Additional Rescue Equipment

- One hundred Feet (100') of 5/8" OSHA approved rope.
- Two (2) OSHA approved full body harness
- One (1) Stretcher

7. Fire Extinguishers:

- One (1) 20#, Class ABC fire extinguisher shall be located in the safety trailer.

8. Communication:

- Cellular Phones/Mobile Phones or two-way radios shall be available via the vehicles on location and on the rig floor.

TOXIC EFFECTS OF HYDROGEN SULFIDE

Hydrogen Sulfide (H₂S) is extremely toxic. The accepting ceiling concentration for an eight (8) hour exposure is 10PPM, which is .001% by volume. Hydrogen sulfide (H₂S) is colorless. Hydrogen Sulfide (H₂S) is heavier than air, the specific gravity is equal to 1.19, which is 20% heavier than ambient temp air, which is 1.00. Hydrogen sulfide (H₂S) can form an explosive mixture with air between 4.3% and 46.0%. By volume hydrogen sulfide (H₂S) is as toxic as hydrogen cyanide and is between 5-6 times more toxic than carbon monoxide.

TOXICITY OF VARIOUS GASES

Common Name	Chemical Formula	Specific Gravity	Threshold Limit ¹	Hazardous Limit ²	Lethal Concentration ³
Hydrogen Cyanide	HCN	0.94	10 PPM	150 ppm/Hr	300PM
Hydrogen Sulfide	H ₂ S	1.189	10 PPM ⁴ 15 PPM ⁵	100 PPM/Hr	600 PM
Sulfur Dioxide	SO ₂	2.21	2 PPM	N/A	100 PPM
Chlorine	CL ₂	2.45	1 PPM	4 PPM/Hr	1000 PPM
Carbon Monoxide	CO	.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 PPM	Combustible @5%	N/A

(1) Threshold limit – Concentration at which it is believed that all workers may be repeatedly exposed, day after day with out adverse effects also referred to as Time Weighted Average (TWA).

(2) Hazardous limit – Concentration that may cause death

(3) Lethal concentration – Concentration that will cause death with short-term exposure

(4) Threshold limit – 10PPM – NIOSH guide to chemical hazards

(5) Short – term threshold limit – Concentration higher than Threshold limit with limits placed on time one can be exposed. Exposure time is limited to 15 minutes followed by one (1) hour in fresh air. This cycle can be repeated for four (4) times during a normal eight (8) hour work day.

PHYSICAL EFFECTS OF HYDROGEN SULFIDE (H₂S)

(Concentrations are calculated @ 15.00 psia and 60 ° F.)

Concentrations		Physical Effects
0.0001%	10 PPM	Obvious & unpleasant odor. Safe for eight (8) hour exposure.
0.005%	50 PPM	Can cause some flu-like symptoms and can cause pneumonia
0.01%	100 PPM	IDLH ¹ . Kills the sense of smell in 3 to 15 minutes. May irritate eyes and throat.
0.02%	200 PPM	Kills the sense of smell rapidly. Severely irritates eyes and throat. Severe flu-like symptoms after 4 or more hours may cause lung damage and/or death.
0.06%	600 PPM	Loss of consciousness quickly, death will result if not rescued promptly.

(1) Immediately dangerous to life or health

TOXICITY OF HYDROGEN SULFIDE

H₂S % (PPM)	0 – 2 Minutes	0 – 15 Minutes	15 – 30 Minutes	30 Minutes to 1 Hours	1 – 4 Hours	4 - 8 Hours	8 – 48 Hours
0.005 (50 ppm) 0.010 (100 ppm)				Mild Conjunctivitis; Respiratory Tract Irritation			
0.010 (100 ppm) 0.015 (150 ppm)		Coughing; Irritation of eyes; loss of sense of smell	Disturbed Respiration Pain in eyes; Sleepiness	Throat	Salivation & Mucous Discharge; Sharp Pain in eyes; Coughing	Increased Symptoms*	Hemorrhage & Death*
0.015 (150 ppm) 0.020 (200 ppm)		Loss of Sense of Smell	Throat & Eye Irritation	Throat & Eye Irritation	Difficult breathing, Blurred Vision, Light & Shy	Serious irritating Effects	Hemorrhage & Death*
0.025 (250 ppm) 0.035 (350 ppm)	Irritation of Eye and Loss of Sense of Smell	Irritation of Eyes	Painful Secretion of Tears, Weariness	Light & Shy; Nasal Catarrh, Pain in Eyes, Difficult Breathing	Hemorrhage & Death		
0.035 (350 ppm)		Irritation of Eye and Loss of Sense of Smell	Difficult Respiration; Coughing, Irritation of Eyes	Increased Irritation of Eyes & Nasal Tract; Dull pain in Head; Weariness; Light & Shy	Dizziness, Weakness; Increased Irritation; Death	Death*	
0.050 (500 ppm)	Coughing, Collapse & Unconsciousness	Respiratory Disturbances; Irritation of Eyes; Collapse	Serious Eye Irritation; Palpitation of Heart, Few Cases of Death	Severe pain in eyes and head, Dizziness; Trembling of Extremities; Great Weakness & Death*			
0.060 (600 ppm) 0.070 (700 ppm) 0.080 (800 ppm) 0.100 (1000 ppm) 1.150 (1500 ppm)	Collapse* Unconsciousness Death*	Collapse* Unconsciousness Death					

***Data secured from experiments of dogs, which have susceptibility similar to men/women.**

****PPM parts per million**

THE USE OF SELF-CONTAINED BREATHING AIR EQUIPMENT

SCBA should be worn when:

- Working near the top or on top of any tank.
- Disconnecting any line where H₂S can reasonably be expected.
- Sampling air in the area to determine if toxic concentration of H₂S exist.
- Working in areas where over 10PPM of H₂S has been detected.
- At any time there is a doubt as to the H₂S level in the area to be entered.

Air quality testing shall be continuous throughout the entire operation if a container is breeched or in a hazardous location.

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

Facial hair and standard eyeglasses are not allowed with SCBA use.

Contact lenses are never allowed with the use of SCBA.

The SCBA shall be inspected monthly.

After each use, the SCBA shall be cleaned, disinfected, serviced, inspected and refilled to proper specifications.

RESCUE & FIRST AID FOR VICTIMS OF HYROGEN SULFIDE (H₂S) **POISONING**

Do not panic!

Remain calm and think with your head and not your heart.

Don breathing apparatus

Protect yourself, then remove victim to fresh air as quickly as possible.
When evacuating: walk not run, upwind and uphill from the source or crosswind 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.