District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-101
Revised March 17, 1999

Submit to appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☐ AMENDED REPORT

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

[1] Operator Name and Address	[2] OGRID Number
Threshold Development Company 777 Taylor Street - Penthouse II Fort Worth, TX 76102	23032
	[3] API Number 30- 015- 32898

[3] Property Code	[5] Property Name	[6] Well No.
	TDC 8 State	1

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	8	19S	29E		1650	South	330	West	Eddy

[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/West line	County

[9] Proposed Pool 1	[10] Proposed Pool 2
Und. Queen-Grayburg-San Andres	

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	O	Rotary	S	3375' GR
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
N	3000'	Queen-GB-SA	Unknown	ASAP

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4"	8-5/8"	24# & 32#	~~500'~~ @ 30c	350	Surface
7-7/8"	5-1/2"	10.5#	3000'	700	~~500'~~ Circ
					To Surface
Operator To Set Surface casing			Above The Salado.		

[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.

Threshold Development Company proposes to drill and test the Queen and intermediate formations. If productive, caisng will be set and zones of interest perforated and stimulated as needed for production.

MUD PROGRAM: Fresh water from surface to 500'; cut brine to TD
BOP PROGRAM: 3K Schaefer, blind and pipe rams

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: Rusty Klein
Printed name: Rusty Klein
Title: Agent
Date: July 14, 2003
Phone: 505-365-4245 or 505-748-2159

OIL CONSERVATION DIVISION

Approved by: Chris Williams
Title: SUPERVISOR, DISTRICT II
Approval Date: JUL 24 2003 Expiration Date: JUL 24 2004
Conditions of Approval:
Attached ☐

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State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

Form C-102
Revised March 17, 1999

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
		Und. Queen-Grayburg-San Andres

Property Code	Property Name	Well Number
	TDC STATE SECTION 8	1

OGRID No.	Operator Name	Elevation
23032	THRESHOLD DEVELOPMENT CORPORATION	3375'

Surface Location

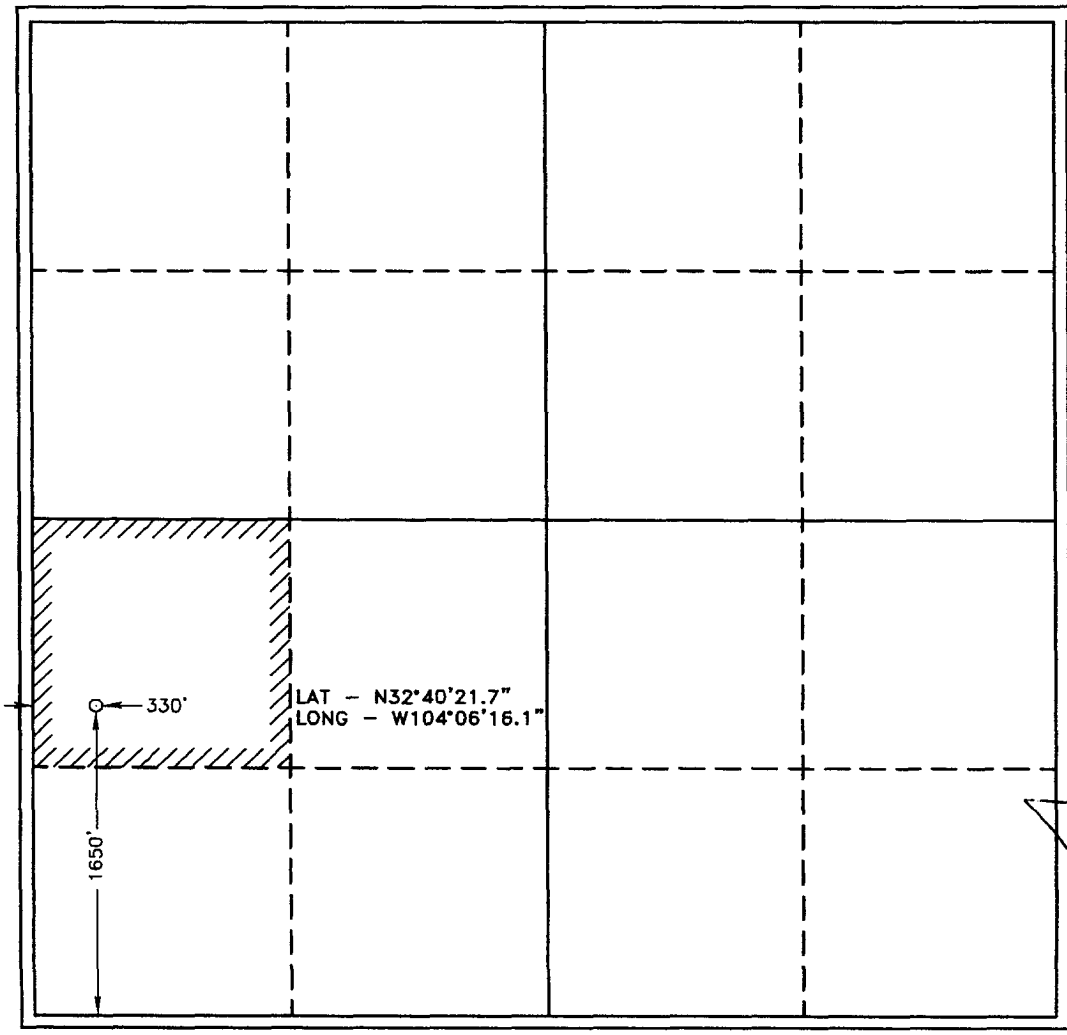
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	8	19 S	29 E		1650	SOUTH	330	WEST	EDDY

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	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Rusty Klein
Printed Name

Agent
Title

July 14, 2003
Date

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 supervison, and that the same is true and correct to the best of my belief.

JUNE 18, 2003
Date Surveyed

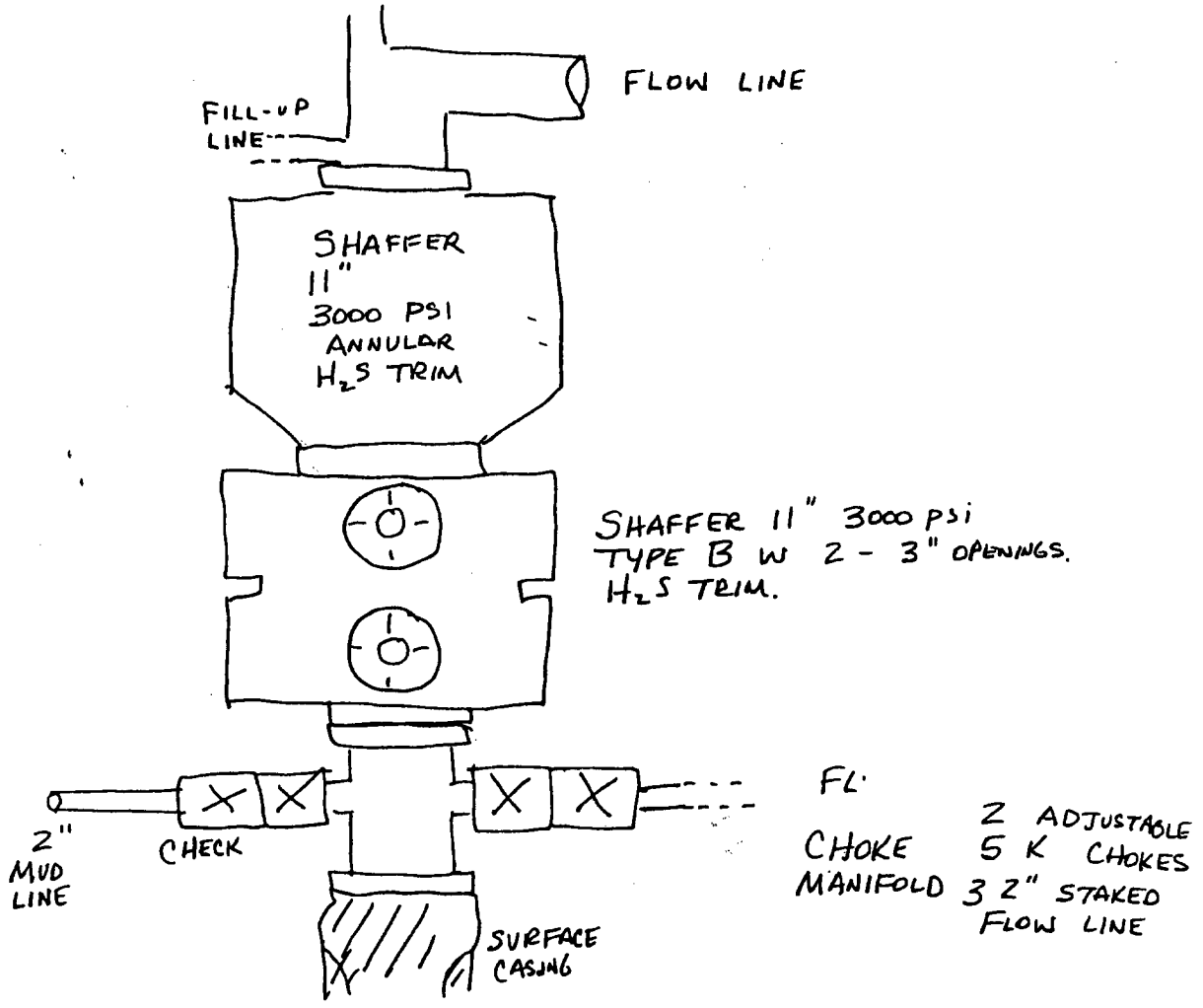
Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

W.O. No. 3350A

Certificate No. Gary L. Jones 7977

BASIN SURVEYS



THRESHOLD DEVELOPMENT COMPANY
TDC 8 State #1
1650' FSL & 330' FWL
Section 8-T19S-R29E
Eddy Co., NM

ACTION SAFETY

H_2S CONTINGENCY PLAN

THRESHOLD DEVELOPMENT COMPANY

TDC 8 STATE #1
Section 8, Township 19 South, Range 29 East
Eddy County, New Mexico

TABLE OF CONTENTS

SCOPE

This plan establishes Threshold Development Company's guidelines for all company and contract employees whose duties may involve exposure to hydrogen sulfide (H_2S) gas on the TDC 8 State #1 location. This lease is located 1650'from the south line and 330' from the west line in Section 8 of Township 19 South, Range 29 East of Eddy 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 encompasses the radius of exposure (ROE) in this plan and,

B. There are houses, 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 Threshold Development Company is to:

A. Prevent any and all accidents, and to prevent the uncontrolled release of H2S into the atmosphere and,

B. Provide proper evacuation procedures to cope with emergencies and,

C. Provide immediate and adequate medical attention should an injury occur.

It should be noted that Threshold Development Company does not expect there to 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 11.

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. Contact Threshold Development Company personnel at the earliest time available according to the emergency call out list below.

The Threshold Development Company supervisor will assess the situation and assign duties to various persons to bring the situation under control. Notification of local emergency response agencies and residents will be assigned by the Threshold Development Company supervisor. Media inquiries are to be referred to Threshold Development Company at 777 Taylor Street – Penthouse II in Fort Worth, Texas.

Threshold Development Company
Emergency call out numbers

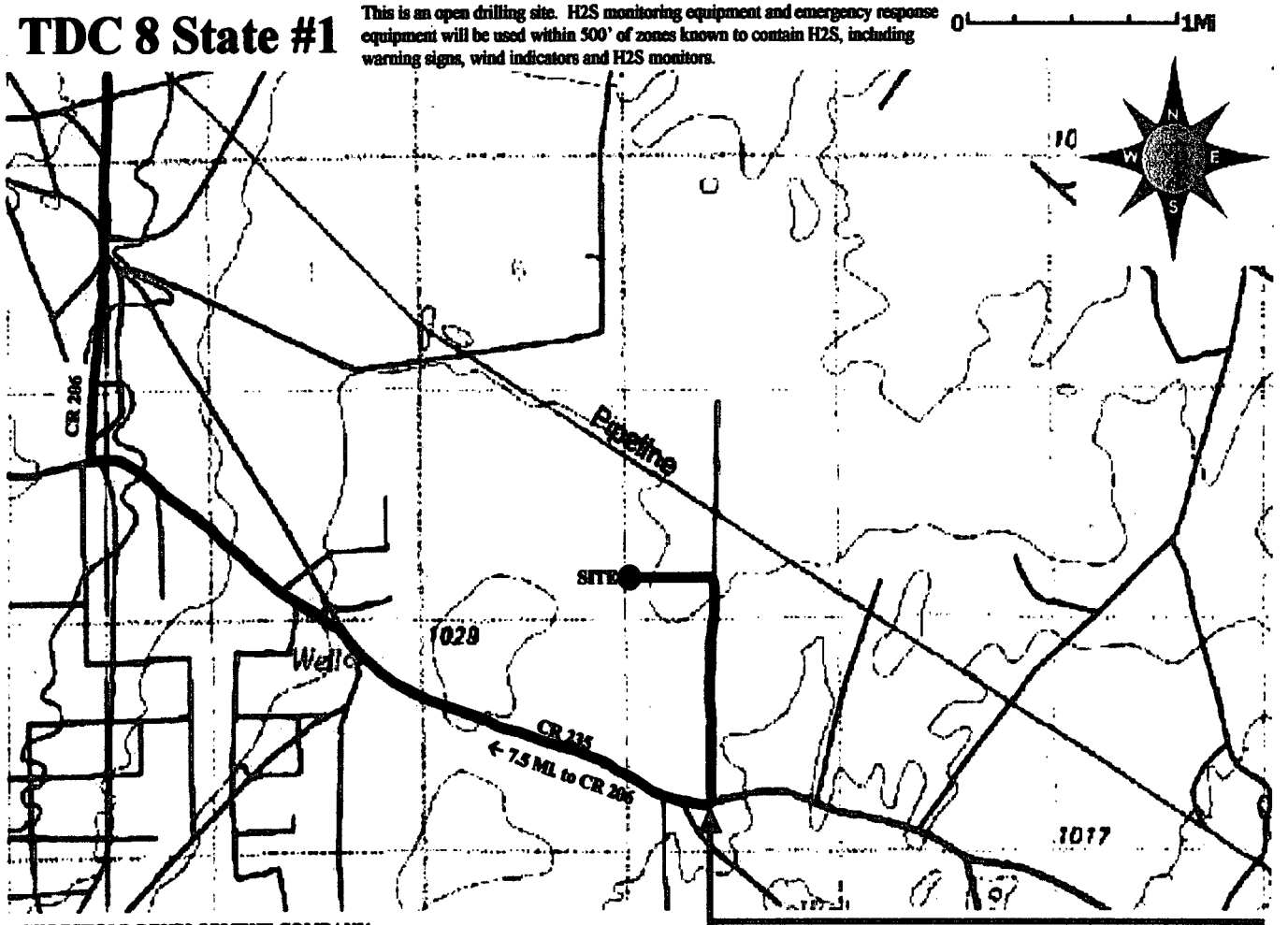
NAME	OFFICE PHONE	CELL PHONE
Morris Keith	(817) 870-1483	(817) 980-3088
Gary Tidmore	(817) 870-1483	

Emergency Notification Numbers
Eddy County

Organization or Agency	Phone Number
New Mexico State Police	(505) 748-9718
Eddy County Sheriff 's Department	(505) 746-9888
Emergency Medical Service (Ambulance)	911 or (505) 746-2701
Eddy County Emergency Management (Harry Burgess) State Emergency Response Center (SERC) Chairman (Max Johnson)	(505) 887-9511 (505) 476-9620
Loco Hills Fire Department Artesia Fire Department	(505) 677-2349 (505) 746-2701
New Mexico Oil Conservation Division (District II)	(505) 748-1283
National Response Center (NRC)	(800) 424-8802
Chemtrec	(800) 424-9300
Action Safety	(505) 393-3501
Cudd Pressure Control	(915) 699-0139 (915) 563-3356
Boots & Coots IWC	(800) 256-9688 (281) 931-8884
Halliburton	(505) 746-2757
B.J. Services	(505) 746-3569
Flight for Life – Lubbock, TX Aerocare – Lubbock, TX Med Flight Air Amb. – Albuquerque, NM SB Air Medical Service – Albuquerque, NM	(806) 743-9911 (806) 747-8923 (505)-842-4433 (505) 842-4949

TDC 8 State #1

This is an open drilling site. H2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H2S, including warning signs, wind indicators and H2S monitors.



THRESHOLD DEVELOPMENT COMPANY
LEASE ROAD MAP

TDC 8 State #1
1650' FSL & 330' FWL of
Section 8-T19S-R29E
Eddy Co., NM

1.1 Mi.. North and 0.3 Mi. West to site from here.

RADIUS OF EXPOSURE (ROE) CALCULATION SHEET

Company	Lease Information
Threshold Development Co.	TDC 8 State #1
777 Taylor Street	1650' FSL & 330' FWL
Penthouse II	Sec 8, T19S, R29E
Fort Worth, Texas 76102	Eddy County, New Mexico

Hydrogen Sulfide (H2S) Concentration: 0 PPM

Gas Escape Rate/Per Day: 100 MCF/DAY

100 PPM ROE	0 Ft.
500 PPM ROE	0 Ft.

Signature of Tester _____ Date 7/18/03

I certify that the above calculations are true and correct, to the best of my knowledge and belief at the time the tests were performed.

2125 French Drive/P.O. Box 826
Hobbs, New Mexico 88241
Phone: 505-393-3501
FAX: 505-397-1455
actsafe@leaco.net
www.actionsafetyusa.com

EMERGENCY PROCEDURES FOR UNCONTROLLABLE RELEASE OF HYDROGEN SULFIDE GAS (H_2S)

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 the source of H_2S.

5. Deny entry to unnecessary personnel.

6. Notify necessary public safety personnel:
   - State Police = if on or near a state road
   - 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 New Mexico Oil Conservation Division.

4. While attempting to control the release, maintain tight security and safety procedures.

5. Use the buddy system when entering any hazardous area.

The responsibility of this plan is with the Threshold Development Company supervisor(s) who shall be in complete command during the emergency.

PUBLIC PROTECTION PLAN

There are no houses or public facilities within the calculated potential radius of exposure (ROE) of this well. However, there is a lease road within the ROE of this well. Block this road a safe distance from the hazardous zone. These roadblocks shall be maintained until it has been determined by the Threshold Development Company supervisor that affected areas are safe to be re-entered.

The company supervisor(s) have been designated within this contingency plan and his phone number listed. If a release of any type is detected on a Threshold Development Company lease, a supervisor shall be notified.

see "General Emergency Action" (Page 3)

PUBLIC EVACUATION PLAN

1. When the company supervisor determines the H_2S cannot be limited to the TDC 8 State #1 Well location and the public will be involved, the evacuation plan shall be activated.

2. The supervisor will notify local emergency response agencies that a hazardous condition exists and implement evacuation procedures.

3. A safety person, trained in the use of H_2S detection equipment and self-contained breathing apparatus, shall monitor H_2S concentrations, wind directions and area of exposure. He will determine the outer perimeter of the hazardous gas area. Extension to the evacuation area shall be determined from the information gathered. Continuous monitoring shall remain in effect until the incident is terminated.

4. Law enforcement shall be called to aid in setting up and maintaining roadblocks. They will also aid in evacuation of the public if necessary but shall not be asked to enter the hazardous zone.

5. Continuous communication shall be maintained between company personnel and law enforcement personnel.

6. After the discharge of gas has been controlled, the safety person shall determine when the area is safe for re-entry.

All atmospheric monitoring of hydrogen sulfide (H_2S) gas shall be done only with UL-approved monitors classified within a minimum classification of intrinsically safe, for use in class 1, groups A,B,C, and D, division 1 hazardous locations. These monitors shall also have a minimum capability of reading H2S, oxygen, and flammability values.

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 pressure self-contained breathing apparatus and a D-ring style, OSHA approved full body safety harness with a non-flammable safety rope attached

2. One (safety) person will test the atmosphere for explosive gases with an approved Triple-range (H_2S, O_2, LFL) monitor. The other person (company supervisor) is responsible for igniting the well.

3. Primary method of ignition shall be with a 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 H_2S will produce SO_2, 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.*

EMERGENCY EQUIPMENT REQUIREMENTS

1. **Respiratory Protection**

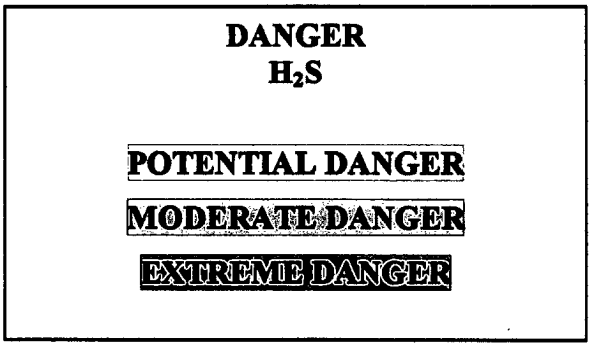
   - **Rescue Units (SCBA's)** – 1 unit shall be placed at each briefing area and 2 shall be stored in the safety trailer.

   - **Work/Escape Units** – 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 Escape Units** – 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:



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

Yellow / normal conditions **Orange** / potential danger **Red** / danger, H_2S present

3. **Briefing Area:** Two (2) briefing areas, designated 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 H_2S monitor with three sensors shall be located on the rig in the top dog house. The H_2S monitor shall be calibrated to alarm at 10 PPM 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 H_2S gas, shall be located in the safety trailer.

6. **Auxiliary Rescue Equipment:**

- One (1) Stretcher
- Two (2) OSHA approved full body harness
- One Hundred (100) feet of 5/8" OSHA approved rope

7. **Fire Extinguishers:**

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

8. **Communication:**

- Mobile, cellular phones or two way radio's shall be available via the vehicles on location and on the rig floor.

TOXIC EFFECTS OF HYDROGEN SULFIDE

Hydrogen sulfide is extremely toxic. The acceptable ceiling concentration for eight hour exposure is 10 ppm which is .001% by volume. Hydrogen sulfide is heavier than air (Specific Gravity = 1.19, approximately 20% heavier) and colorless. It forms an explosive mixture with air between 4.3% and 46.0%. By volume hydrogen sulfide is almost as toxic as hydrogen cyanide and is between 5 and 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	300 ppm
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm [4] 15 ppm [5]	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	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 ppm	Combustible @ 5%	N/A

1 Threshold limit – Concentration 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

Concentrations		Physical Effects
0.001%	10 ppm	Obvious and unpleasant odor. Safe for 8 hour exposure.
0.005%	50 ppm	Can cause some flu-like symptoms and can cause pneumonia.
0.01%	100 ppm	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.

(These concentrations are calculated @ 15.00 psia and 60 degree F.)

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 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 as to the H_2S 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 the 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 HYDROGEN SULFIDE (H_2S) POISONING

Do not panic

Remain calm and think

Don breathing apparatus.

Remove victim to fresh air as quickly as possible; i.e. upwind and uphill from source or crosswind to achieve upwind. ***Do not run downwind.***

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.