

RUBICON OIL AND GAS, LLC  
508 WEST WALL ST., SUITE 500  
MIDLAND, TEXAS 79701

JAN 18 2008  
OCD-ARTESIA

**Hydrogen Sulfide (H<sub>2</sub>S)  
Contingency Plan**

For

Lakewood 21, Well #2  
Section 21, ~~T9S~~, R26E  
1980' FSL and 1800' FEL (J)

21-T19S-R26E

Eddy County, New Mexico

30-015-36047

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## Preface:

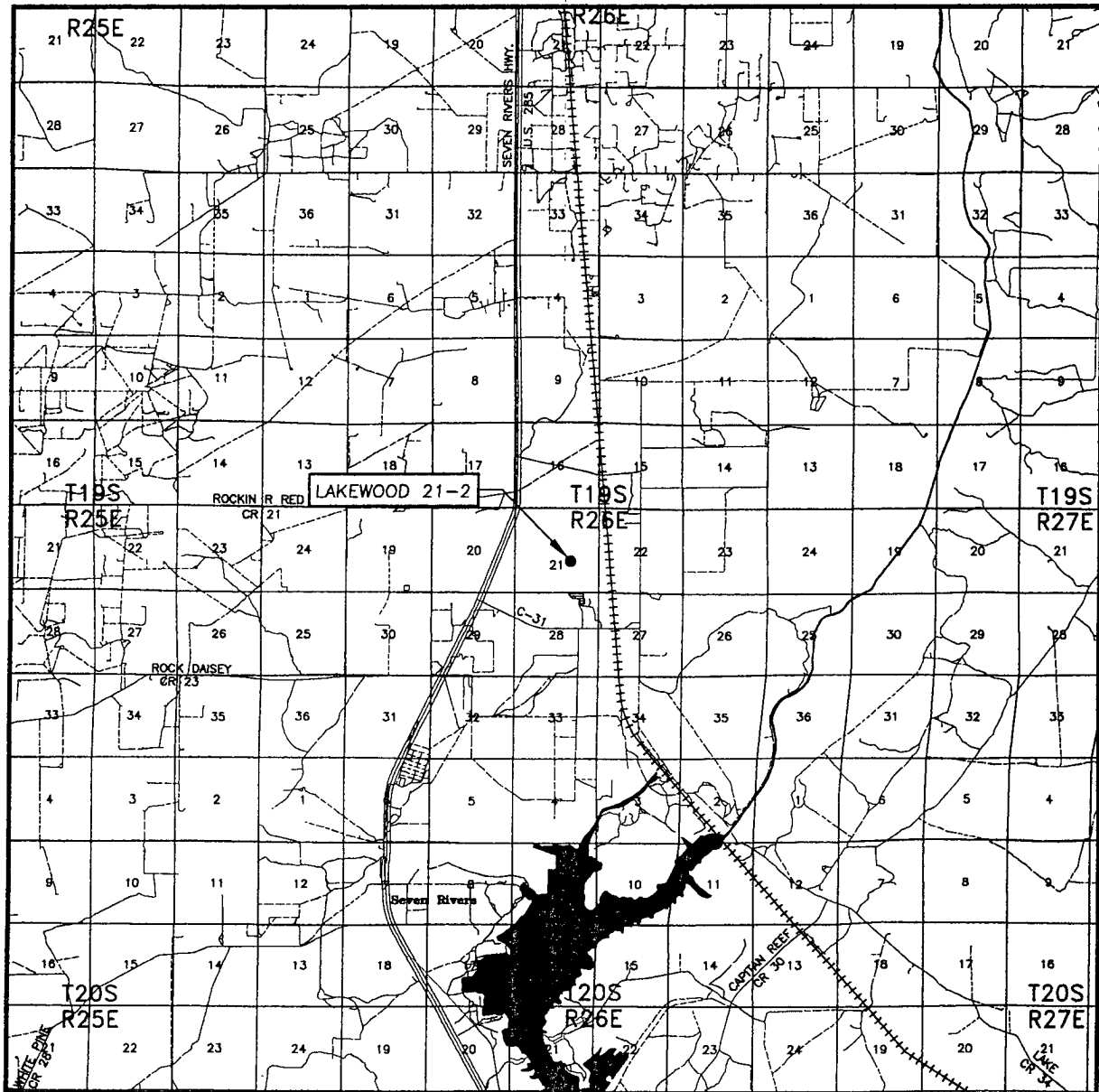
An effective and viable Contingency Plan is intended to provide prior planning and guidance in responding to emergency incidents. The primary considerations in its development is the protection of personnel, the public, company and public property, and the environment.

Although the plan addresses varied emergency situations which may occur, it recognizes that flexibility and the use of the operator, contractors and public service knowledge and experience is critical to safe resolution of emergency incidents. Response actions outlined in the plan provide a framework, which may be placed into operation without confusion. These actions should promote quick and decisive actions during the critical initial period and immediately following an emergency. As the response progresses, additional guidelines and procedures will occur to properly implement and address the emergency situation. All emergency incidents must be properly reported by Rubicon Oil and Gas, LLC policy, abiding by all state and federal agency requirements.

This Contingency Plan is intended for use on the Rubicon Oil and Gas, LLC (*Rub*) drilling, downhole and surface projects associated with the drilling and production of oil and/or gas, and the operations within their area of responsibility.

A copy of this Contingency Plan is to be maintained in the drilling dog house, rig managers trailer, and with the company representative at all times.

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 21 TWP. 19-S RGE. 26-E

SURVEY N.M.P.M.

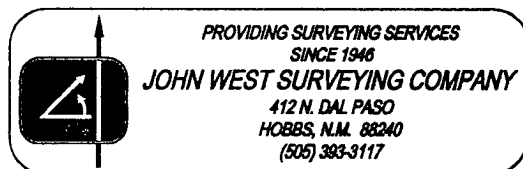
COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 1980' FSL & 1800' FEL

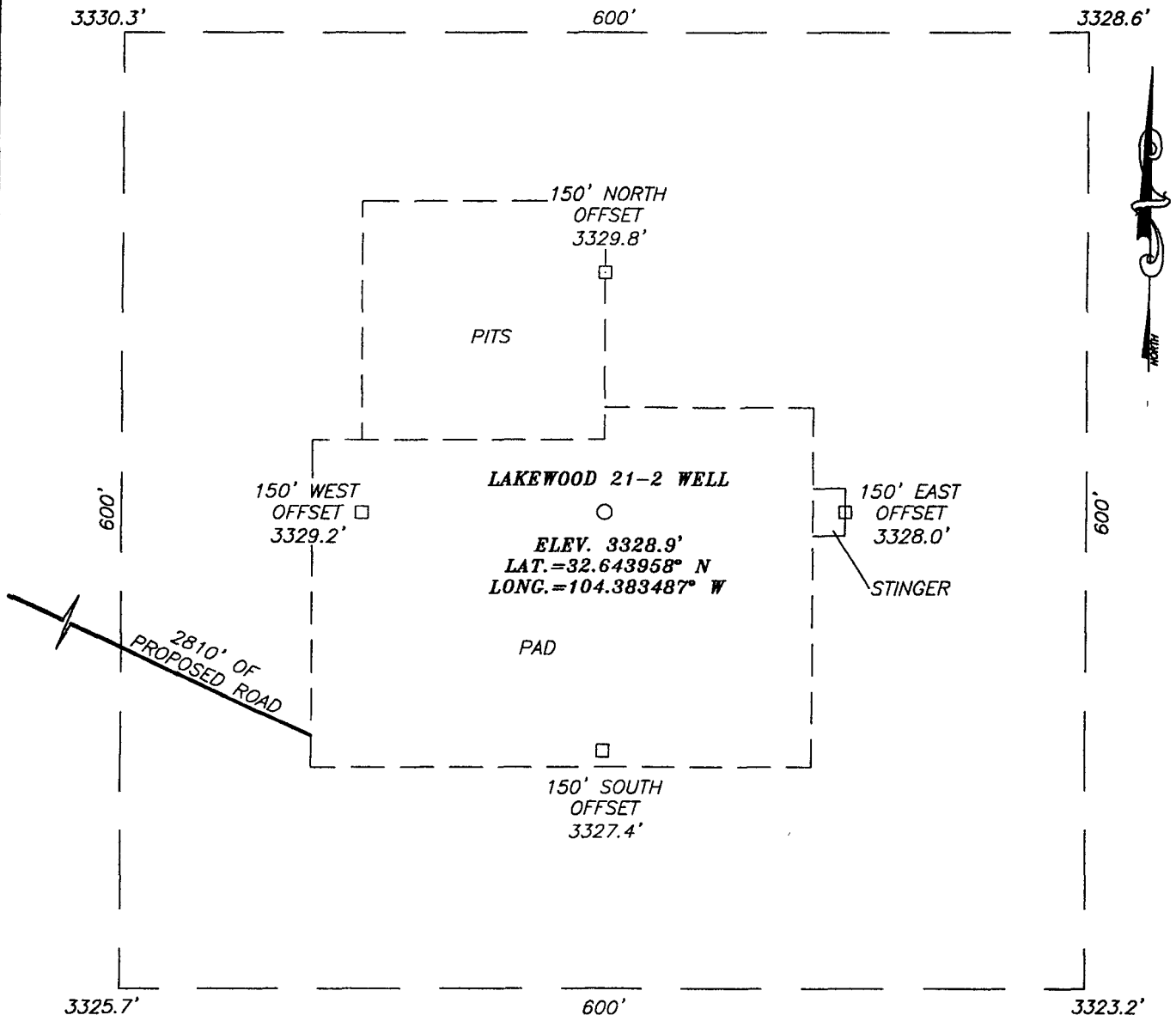
ELEVATION 3329'

OPERATOR RUBICON OIL AND GAS, LLC

LEASE LAKEWOOD

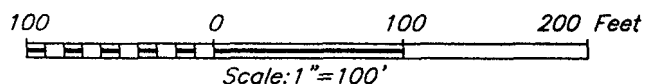


**SECTION 21, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.,**  
 EDDY COUNTY, NEW MEXICO



**DIRECTIONS TO LOCATION**

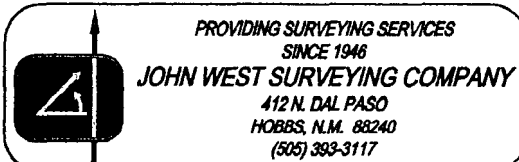
FROM THE INTERSECTION OF U.S. HWY. #285  
 (SEVEN RIVERS HWY.) AND CO. RD. #31  
 (LAKEWOOD ROAD), GO NORTHEAST ON HWY. #285  
 APPROX. 1.1 MILES. TURN RIGHT AND GO EAST  
 APPROX. 0.1 MILE. TURN RIGHT ON RANCH ROAD  
 AND GO SOUTHEAST APPROX. 0.3 MILES TO A  
 PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY  
 SOUTHEAST APPROX. 2810 FEET TO THIS  
 LOCATION.



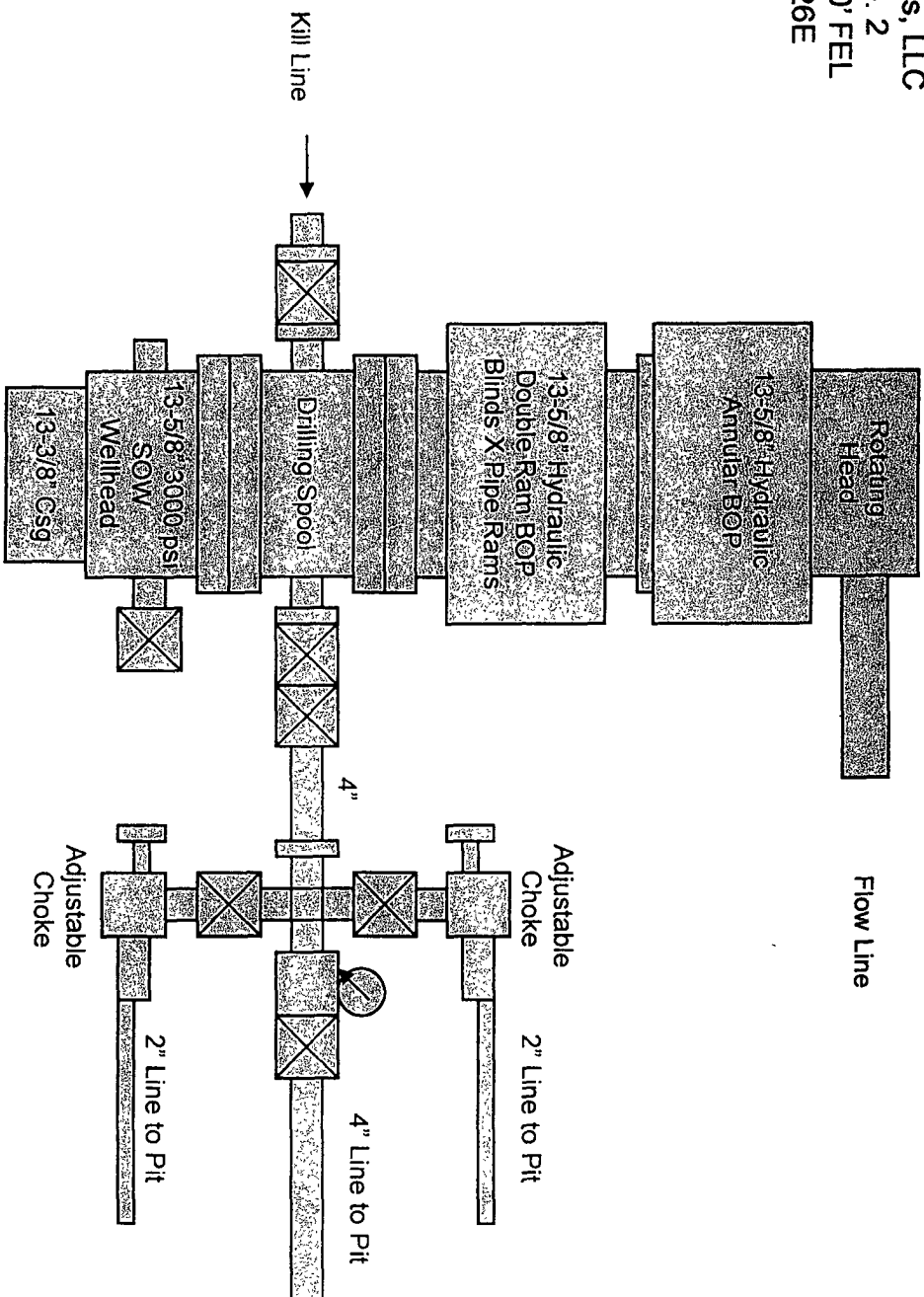
**RUBICON OIL AND GAS, LLC**

LAKEWOOD 21-2 WELL  
 LOCATED 1980 FEET FROM THE SOUTH LINE  
 AND 1800 FEET FROM THE EAST LINE OF SECTION 21,  
 TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO.

Survey Date: 10/10/07	Sheet 1 of 1 Sheets
W.O. Number: 07.11.1388	Dr By: LA
Date: 10/17/07	Disk: 07111388
	Rev 1:N/A
	Scale: 1"=100'

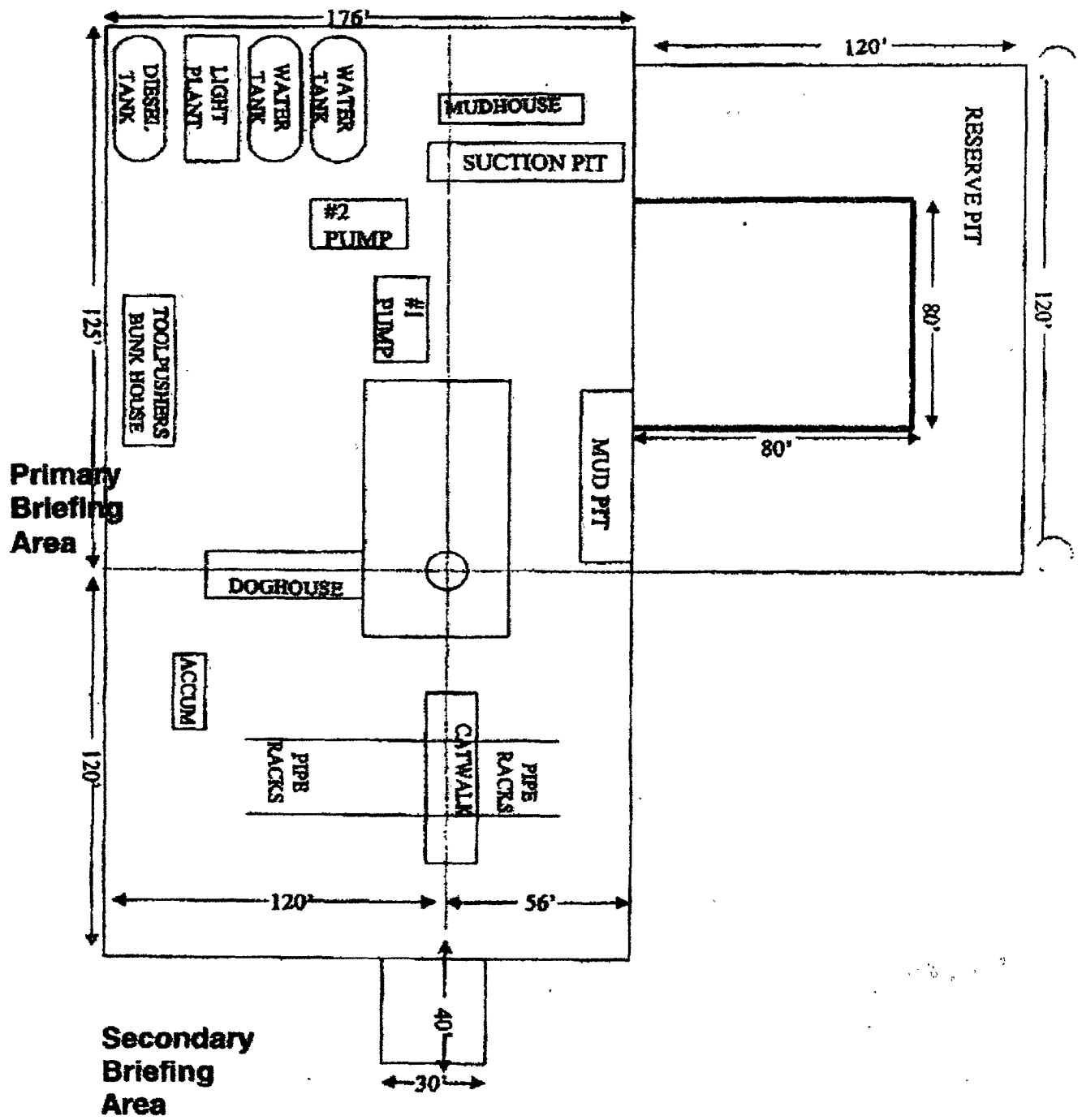


Rubicon Oil & Gas, LLC  
Lakewood 21 No. 2  
1980' FSL & 1800' FEL  
Sec 21, T19S, R26E  
Eddy County, NM



3000 psi Working Pressure  
BOPE Configuration  
And Choke Manifold

Exhibit " "



## **EMERGENCY RESPONSE ACTIVATION AND GENERAL RESPONSIBILITIES**

### **Activation of the Emergency Action Plan:**

In the event of any emergency situation, all personnel on location should first ensure that the following items are initiated. After that, they should refer to the appropriate Specific Emergency Guidance sections as specified under "Well Control" within this document for further responsibilities:

1. Notify the senior ranking contract representative on site.
2. Notify Rubicon representative in charge.
3. Notify civil authorities if the Rubicon representative cannot be contacted and the situation dictates.
4. Perform rescue and first aid as required, without harm to additional personnel.

### **General Responsibilities:**

**Operations Specialist:** The Rubicon drilling/well servicing supervisor or contract supervisory personnel will serve as Operations Chief Officer for all emergency incidents. The Operations Chief Officer is responsible for:

1. Notification to the downhole/drilling supervisor for the company and rig of the incident occurrence.
2. Notification to the onsite Rubicon representative to lead the emergency response notification to area emergency responders and establish situational control and restore operations to a non-emergency state.
3. The Incident Commander shall be the Rubicon drilling supervisor on site, who will serve as the overall Incident Commander for the drilling, downhole or critical well servicing emergency incident. He/she is responsible for:
  - a. Coordinating with downhole service personnel for notification to all Rubicon personnel and their representatives.
  - b. Establishing and managing the overall incident command structure and response from inception through restoration of normal activities on location and in the area.

**Contract Drilling Personnel** will immediately report to their assigned stations and perform their duties as outlined in the appropriate *Specific Emergency Guidance* section within this report.

**Other Contractor Personnel** will report to the safe briefing area to assist Rubicon personnel and civil authorities as requested when it is safe to so do and if they have been adequately trained in their assigned duties.

**Civil Authorities:** Law Enforcement, Fire and EMS will be responsible for:

1. Establishing membership in the unified incident command.
2. As directed by the site supervisor and as directed by civil procedure, control site access, re-route traffic, and provide escort services for response personnel.
3. Perform all fire control activities in coordination with the site command.
4. Initiate public evacuation plans as instructed by the site command.



5. Perform rescue or recovery activities with coordination from the site command.
6. Provide medical assistance as dictated by the situation at hand.

### **H2S Release:**

The following procedures and responsibilities will be implemented on activation of the H2S siren and lights.

#### **All Personnel:**

1. On alarm, put on escape unit (as available) and report to upwind briefing area.

#### **Rig Manager/Tool Pusher:**

1. Check that all personnel are accounted for and their condition.
2. Administer or arrange for first aid treatment and/or call EMTs as needed.
3. Identify two people best suited to secure well and perform rescue, and instruct them to don SCBA.
4. Notify Contractor management and the Rubicon representative(s).
5. Remain at the briefing area, assess and monitor personnel and overall situation for hazards or conditions that might warrant a change in the action plan.

#### **Two People Responsible for Shut-in and Rescue:**

1. Put on SCBA and acquire tools to secure well and perform rescue, i.e., wrenches, retrieval ropes, etc.
2. Utilize the buddy system to secure well and perform rescue(s).
3. Return to the briefing area and stand by for further instructions.

#### **All Other Personnel:**

1. Isolate the area and prevent entry by other persons into the 100 ppm radius of exposure (ROE). Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

#### **Rubicon Representative(s):**

1. Remain at the briefing area, assess and monitor personnel and overall situation for hazards or conditions that might warrant a change in the action plan.
2. Notify all operations representatives, H2S response representatives, police, fire department and other local emergency services, as required.

#### **Training:**

There will be an initial training session prior to encountering a known or Probable H2S zone (within 3 days or 500 ft.) 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 H<sub>2</sub>S Drilling Operations Plan and the Contingency Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received proper training.

Ignition of Gas Source:

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the New Mexico Oil Conservation Division (NMOCD) and local officials. Additionally the New Mexico State Police shall be the Incident Command of any major release. Ignition of the well will be with the concurrence of the drilling supervisor and the Rubicon supervisor as time allows.

Characteristics of H<sub>2</sub>S and SO<sub>2</sub>:

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H <sub>2</sub> S	1.189 Air=1	10 ppm	100 ppm	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21 Air=1	2 ppm	N/A	1000 ppm

Contacting Authorities:

Rubicon personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the NMOCD 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 following call list of essential and potential responders has been prepared for use during a release. This response plan must be in coordination with the State of New Mexico's Hazardous Materials Emergency Response Plan (HMER).

## **WELL CONTROL**

The following procedures will be implemented when a loss of primary control is indicated. Indicators of loss of primary control are flow from the well, an increase in pit volume, or when the drilling fluid used to fill the hole on trips is less than the calculated pipe displacement volume. The emergency signal for well control procedures will be a single long blast of the rig air horn.

### **Kick While Drilling - Procedures And Responsibilities**

#### **Driller:**

1. Stop the rotary and hoist the kelly above the rotary table.
2. Stop the mud pump(s).
3. Check for flow.
4. If flowing, sound the alarm immediately.
5. Ensure that all crew members fill their responsibilities to secure the well.
6. Record drill pipe and casing shut-in pressures and pit volume increase and begin kill sheet.

#### **Derrickman:**

1. Go to BOP/choke manifold area.
2. Open choke line valve on BOP.
3. Signal to Floorman #1 that the choke line is open.
4. Close chokes after annular or pipe rams are closed.
5. Record shut-in casing pressure and pit volume increase.
6. Report readings and observations to Driller.
7. Verify actual mud weight in suction pit and report to Driller.
8. Be readily available as required for additional tasks.

#### **Floorman # 1:**

1. Go to accumulator control station and await signal from Derrickman.
2. Close annular preventer and HCR on signal (if available, if not then close pipe rams).
3. Record accumulator pressures and check for leaks in the BOP or accumulator system.
4. Report to Driller, and be readily available as required for additional tasks.

#### **Floorman # 2:**

1. Start water on motor exhausts.
2. Notify Contractor Tool Pusher or Rig Manager of well control situation.
3. Check location for ignition sources and extinguish or turn off, and stop any welding in progress.
4. Report to Driller, and be readily available as required for additional tasks.

Floorman # 3:

1. Stand-by with Driller, and be readily available as required for additional tasks.

Tool Pusher/Rig Manager:

1. Notify Rubicon Representative and report to rig floor.
2. Review and verify all pertinent information.
3. Communicate information to Rubicon Representative, and confer on an action plan.
4. Finalize well control worksheets, calculations and preparatory work for action plan.
5. Initiate and ensure the action plan is carried out,
6. Communicate any changes in well or site conditions, or any indications that the action plan needs to be revised to the Rubicon representative.

Rubicon Representative:

1. Notify Operation Specialists or Team Leader and RMT Leader or Local incident Commander, and Police, Fire Department, or other local emergency services as required.

**Kick While Tripping: Procedures and Responsibilities**

Driller:

1. Sound the alarm immediately when pipe displacement volume is less than 75% of calculated.
2. Position the upper tool joint just above rotary table and set slips.
3. Check for flow.
4. Ensure that all crew members fill their responsibilities to secure the well.
5. *Record drill pipe and casing shut-in pressures and pit volume increase, and begin kill sheets,*

Derrickman: (same as while drilling)

Floor Man # 1 \*

1. Install full opening valve (with help from Floorman #2) in top drill string connection.
2. Tighten valve with make up tongs.
3. Go to accumulator control station and await signal from Derrickman.
4. Close annular preventer and HCR valve on signal (if available, if not then close pipe rams).
5. Record accumulator pressures and check for leaks in the BOP and accumulator system.
6. Report to Driller, and be readily available as required for additional tasks,

Floor Man # 2

1. Assist installing full opening valve in drill string.
2. Position back-up tongs for valve make-up.
3. Start water on motor exhausts,
4. Notify Contractor Tool Pusher or Rig Manager of well control situation.
5. Check location for ignition sources and extinguish or turn off, and stop any welding in progress.
6. Report to Driller, and be readily available as required for additional tasks.

Floor Man # 3, Rig Manager/Tool Pusher, and Rubicon representative: (same as while drilling)

## **PUBLIC RELATIONS**

Rubicon recognizes that the news media have a legitimate interest in incidents at Rubicon *facilities that could affect the public*. It is to the company's benefit to cooperate with the news media when incidents occur because these media are our best liaison with the public.

Our objective is to see that all reports of any emergency are factual and represent the company's position fairly and accurately. Cooperation with news media representatives is the most reliable guarantee that this objective will be met.

All contract and Rubicon employees are instructed NOT to make any statement to the media concerning the emergency incident. If a media representative contacts any *employee, they should refer them to the* designated Emergency Command Center where they should contact the Incident Commander or his designated relief for any information concerning the incident.

**RUBICON OIL AND GAS, LLC**  
**Hydrogen Sulfide (H2S) Contingency Plan**

**CONTACT INFORMATION:**

Rubicon Onsite Company Rep: Jerry Cox, 432-557-3136

Rubicon Supt: Hal Lee, 432-664-9040

Rubicon Engineer, David Wantuck, 432-528-2596

Rubicon Location Supv., Bobby Winn, 432-934-5668

JW Drilling, Artesia, Drilling Supt: Kevin Wilbanks, 505-748-8704

JW Drilling Rig #5, Toolpusher: Clearance Doman, Rig number: 505-513-2414

Halliburton, Hobbs, Pete Garza 800-416-6081

Mud: Ambar Lone Star, Mike Mundy, 800-699-7146

Cudd Pressure Control, 432-699-0139

**Emergency Notification Numbers**

New Mexico State Police	Artesia	505/746-2704
New Mexico State Police	Carlsbad	505/885-3137
New Mexico State Police	Hobbs	505/392-5588
Eddy County Sheriff's Office	Artesia	505/746-2704
Eddy County Sheriff's Office	Carlsbad	505/887-7551
Lea County Sheriff's Office	Hobbs	505/393-2515
Local Emergency Planning Center	Eddy County	505/887-9511
Local Emergency Planning Center	Lea County	505/397-9231
New Mexico Oil & Gas Commission	Artesia	505/748-1283
New Mexico Oil & Gas Commission	Hobbs	505/393-6161
NM Emergency Response Center	Hobbs	505/827-9222
Fire Fighting, Rescue, Ambulance, Police	Artesia	911
Fire Fighting, Rescue, Ambulance, Police	Carlsbad	911
Fire Fighting, Rescue, Ambulance, Police	Hobbs	911
Flight For Life	Lubbock	806/743-9911
Aerocare	Lubbock	806/7478923
Med Flight Air Ambulance	Albuquerque	505/842-4433