

Phoenix Drilling Employee Handbook & Safety Manual



**PHOENIX
DRILLING**

2023

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Introduction

This handbook provides a minimum set of guidance and expectations to the Phoenix Drilling, Employee and Contract employees. This handbook is designed to supplement any Operator's safety policies, not replace them. When a rule or procedure is in question between the operator and Phoenix Drilling the stricter rule shall apply.

1.0 Glossary

Operator — The operator is described as the customer that Phoenix Drilling has written a contract to do work for. Phoenix Drilling will follow their Safety Rules and Policies unless the Phoenix Drilling rules are more stringent.

Contractor— Phoenix Drilling is described as the contract company. Phoenix Drilling will work under the contract of the operator.

Contract Company — A company that provides work for the contractor during a well. The Contract Company may also work on the job site along with the Contractor for the Operator. (Casing crews, rig movers, mechanics, etc.)

Contract Employees — Employees that are employed by the Contract Company to work on the Operator's site for the Contractor. The Contract Employees may also work on the job site along with the Contractor for the Operator.

1.1 Employee Responsibilities

Always keep in mind that your primary responsibility as an employee is to perform your duties in a safe manner in order to prevent injury to yourself and to your co-workers. You should become familiar with the contents of this manual and must learn the approved safe practices applicable to your work and observe them at all times. Before undertaking special operations, you should review the appropriate section of this manual in detail.

The following is a list of the key Employee Responsibilities:

- Observe and comply with federal, state, and local laws while performing your job.
- Observe and comply with Phoenix Drilling procedures and guidelines while performing your job.
- Observe and comply with Operators procedures and guidelines while performing your job.
- Report and correct any unsafe conditions.
- IMMEDIATELY report all accidents, incidents, injuries, near misses and spills to your supervisor.
- Conduct and provide documentation of pre-job JSA' s and other meetings.
- Conduct and provide documentation of drills.
- Inform visitors and contract employees of known hazards on a Phoenix Drilling Rig.
- Inform contract employees and visitors of emergency action plans.

Failure to observe applicable safety rules could result in serious injury to you or a fellow employee. For this reason, UNSAFE WORK PRACTICES MAY RESULT IN DISCIPLINE UP TO AND INCLUDING TERMINATION.

1.2 Phoenix Drilling Rig Managers

Rig Managers or other Phoenix Drilling representatives in charge are responsible for understanding the conditions of the job. They must ensure Phoenix Drilling employees obey the safety rules and policies of Phoenix Drilling and the Operator.

- The Rig Manager should ensure that all additions, removals, or alterations to Phoenix Drilling owned equipment is in accordance with approved standards and applicable codes.
- Rig Managers should conduct a JSA and the pre-tour safety meeting with each crew at each tour change. When hazardous work or new type of operation is about to be undertaken, the Rig Manager should hold briefings to review safety procedures and give the work group and opportunity to make suggestions. In the event the Rig Manager is unavailable the driller shall conduct JSA & Pre-tour meetings.
- In those areas where an inherent hazard exists and cannot be eliminated, the Rig Manager is responsible for familiarizing the group with the situation and developing a means of coping with it.
- For special operations, a Rig Manager may have prescribed authority to make exceptions to the normal safety rules. The Rig Manager should understand authority limitations and obtain any required approval from a higher level of Management before beginning the operation.
- Rig Managers should inform all employees under their supervisory that accidents of any nature are to be reported to them as soon as possible on the same date of the occurrence. Rig Managers in turn will ensure that appropriate communications have been properly handled. Management must be notified immediately in the event of a fatality, serious accident, lost work time injury, or a potential lost work time injury.
- Rig Managers & Superintendents are responsible for reporting and investigating accidents.

1.3 Phoenix Drilling's Contract Employee Responsibilities

The contract company is responsible for their contract employees' safety. The contract company must ensure that their employees are active in pre-job meetings and ensuring that the employees perform their work in a safe and proper manner. The contract employees must read, be familiar with, and follow the Phoenix Drilling Safety Manual and consult with the Rig Manager on duty should he/she have any questions or concerns. The Contract employees must also be familiar with the Operators policies and guidelines... They must also ensure that the contractor's employees are familiar with the proper use of the equipment. Contractors are fully responsible for providing their employees with all necessary protective and safety equipment. Contractors must ensure that all machinery and equipment they furnish is maintained in a safe running order and inspected regularly to ensure safe, continued operation.

1.4 Stop Work Authority

Everyone that comes onto a Phoenix Drilling location is expected to STOP the work of anyone should a person's health or the environment be at risk. No reprimand shall result from this action. If anyone is caught discouraging someone from using the "Stop Work Authority", or is terminated for doing so, report this to the **Phoenix Drilling Management at 432-425-1035**.

1.5 Management of Change

When there is any sort of change to an organization, personnel, systems, process, procedures, equipment, products, materials or substances, and laws and regulations, Phoenix Drilling, cannot proceed unless a Management of Change process is completed. A Job Safety Analysis conducted by all impacted by the change and the development of a work plan that clearly specifies any control measures to be implemented regarding:

- Equipment, facilities and process.
- Operations, maintenance, inspection procedures.
- Training, personnel and communication.
- Documentation
- Authorization of the work plan by the responsible person(s) through completion.

1.6 Employee Conduct

Phoenix Drilling has pride and respect in every employee who works for our company in a safe and productive manner. We expect our employees to conduct themselves in a professional manner on the Phoenix Drilling Locations, Offices, Shops, Yards, or on business trips. Horseplay, practical jokes, fighting, and harassment of any kind are **NOT ALLOWED**. Participating in unprofessional behavior puts the employee in question for immediate termination.

2.0 Abrasive Blasting

All Phoenix Drilling employees must be made aware of abrasive blasting. Any abrasive blasting will be done in the Phoenix yard following the TECQ permits.

3.0 Accident Reporting

If an employee of Phoenix Drilling becomes unconscious, CALL 911 FIRST!!!

Reporting Requirements

1. All employees must immediately report to their immediate supervisor (**Rig Manager**) any injury sustained at work or illness caused by work exposure, no matter how slight the case may be. Failure to report any injury will result in disciplinary action and up to **immediate termination**.
2. The immediate supervisor (**Rig Manager**) must call **Xtreme MD** and investigate the incident and prepare the First Report of Injury. ***Xtreme MD 1-800-600-9015.***

3.1 Serious Injuries

Serious injury-Any injury that requires immediate attention or observation by a medical professional.

1. Serious injuries must be reported by telephone as soon as possible to the Drilling Superintendent, who in turn will report the accidents to the proper authorities.
2. The Rig Manager on duty must ensure that the injured person is transported to a medical professional safely. **Rig Manager or Superintendent Must also call Xtreme MD & inform them of the incident so they can help monitor the case.**
3. Follow the Phoenix Chain of Command.
4. Use the Phoenix Drilling Incident Field Report to record accidents. This should be filled out electronically on safety tablet using Iscout or KPA.

4.0 Bloodborne Pathogens

4.1 Purpose

This section applies to all Phoenix Drilling employees that, as a result of doing their job, could come in contact with blood or other potentially infectious material through the eyes, skin, mucous membrane, or under the skin by means of cuts. This program is in accordance with the requirements of OSHA 29 CFR 1919.1030 Standard.

4.2 Glossary

The definitions of the glossary in this section have been taken from OSHA 29 CFR 1910.1030(b)

Blood means human blood, human blood components, and products made from human blood.

Bloodborne pathogen means pathogenic microorganisms that are present in human blood and can cause diseases in humans. These pathogens include, but not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (**HIV**)

Contaminated means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Decontamination means the use of physical or chemical means to remove, inactivate, or destroy Bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or items in rendered safe for handling, use, or disposal.

Engineering Controls means controls (e.g., sharps disposal containers, self sheathing needles, safer medical device, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the Bloodborne hazard from the workplace.

Exposure Incident means a specific eye, mouth, or other mucous membrane, no-intact skin, or parenteral contact with blood or other potentially infectious material that results from the performance of an employee's duties.

HBV mean hepatitis B virus.

HIV means human immunodeficiency virus.

Licensed Healthcare Professional is a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph *(f)

Hepatitis **B** Vaccination and Post-exposure Evaluation and Follow-up.

Occupational Exposure means reasonable anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Parenteral means piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

Personal Protective Equipment is specialized clothing or equipment worn by an employee for protections against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protections against a hazard are not considered to be personal protective equipment.

Source Individual means any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee.

Sterilize means the use of a physical or chemical procedure to destroy all microbial life including high resistant bacterial endoscopes.

Universal Precautions is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other blood-borne pathogen.

**Paragraph (f) refers to OSHA 29 CFR 1910.1030(f)*

4.3 Method Of Compliance 1910.1030(d)

It is Phoenix Drilling's responsibility to implement this program and to make all necessary decisions to ensure success of this program. This includes equipment purchases necessary to implement and operate the program and a companywide understanding of Universal Precautions.

4.3.1 Universal Precautions 1910.1030(d)(1)

Universal Precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

4.3.2 Engineering and Work Practice Controls 1910.1030(d)(2)

Engineering and Work Practice Controls shall be used to eliminate or minimize employee exposure. Engineering controls shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.

4.4 Personal Protective Equipment 1910.1030(d)(3)

Phoenix Drilling will provide appropriate personal protective equipment such as, but not limited to, glove, face shields or mask and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. Such equipment will be "appropriate" as it will not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, undergarments, skin, eyes, mouth or other mucous membrane under normal conditions of use and for the duration of time which the protective equipment will be used.

4.4.1 Accessibility

All PPE shall be accessible by anyone on a Phoenix Drilling Location. The PPE must not be blocked or hidden by tools, equipment, or other items. If your Location is missing

PPE, contact the Phoenix Drilling Management at 432-425-1035 so that it can be replaced.

4.4.2 Disposal

The Phoenix Drilling HSE Department will ensure that contaminated PPE be disposed of in accordance with the OSHA 29 CFR 1910.1030.

4.4.3 Gloves

Gloves shall be worn when:

- It can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and on-intact skin.
- When assisting an injured employee that is bleeding.
- While performing CPR.
- Disposing of contaminated items.

All gloves will be single use and disposed of after any use.

4.5 Housekeeping 1910.1030(d)(4)

Work areas shall be maintained in a clean and sanitary condition. It is the responsibility of every Phoenix Drilling employee to clean their work areas, tools and equipment and work surfaces when the job is completed.

4.6 Communication of Hazards 1910.1030(g)

Warning labels will be affixed to containers of regulated waste containing blood or other potentially infectious material used to store, transport, or for disposal. Red bags or red containers might be used in place of labels. Training will be provided to all employees including persons designated to administer First Aid to fellow workers.

4.7 Hepatitis B Vaccination/Post-Exposure Evaluation

The Hepatitis B vaccine and vaccination series will be available to all employees who have occupational exposure. A post exposure evaluation and follow-up on all employees who have had an exposure incident will immediately be available. Employees who decline to accept the Hepatitis B vaccination shall sign a declination statement after receiving such training.

4.8 Record Keeping

Medical records will be established and maintained on each employee with occupational exposure. These records will be in accordance with OSHA 29 CFR 1910.1030(h). All medical records will be confidential and will not be disclosed or reported without the employee's express written consent.

5.0 Blow Out Prevention

Blow out prevention equipment is emergency equipment and must be maintained in proper working condition at all times.

The BOP Equipment to be used will be decided by the Operator that Phoenix Drilling is working for.

5.1 BOP Drills

BOP drills will be conducted according to the Operator's Policy. If the Operator has no policy, conduct a function test at a minimum once a well.

5.2 BOP Installation

Before any job is started, a Job Safety Analysis must be conducted. The BOP Equipment must be put in place using pick up lines & winches. All employees must ensure that they are not between the BOP and a stationary object while the BOP is in motion. Ensure that the BOP Ring Gasket is cleaned and in good condition and that the BOP is snubbed off at the bottom of the sub structure before installing it. Once the BOP is in place and ready to be nipped up, ensure that every hole has a stud and is tightened to as much torque that can be applied with a hammer wrench.

5.3 Choke Manifold

During installation, all employees must Ensure that they are not between the Choke Manifold and a stationary object while it is in motion. Ensure that the choke manifold is placed between the pits and close to the BOP location. Install the choke manifold with the supplied studs and tightened to as much torque that can be applied with a hammer wrench. Ensure that the gauges are in good working condition.

5.4 Accumulator

When moving or installing hoses, use two people to carry them to the desired location. Inspect all hoses and ensure that there are no cracks, kinks, or other defects that could compromise the flow of fluid to the BOP. Ensure that handles are clearly marked either "OPEN" or "CLOSED". Any leaks or cracks on any bottles of the accumulator must be fixed immediately.

6.0 Permit-Required Confined Spaces

6.1 Purpose

This section contains requirements for practices and procedures to protect employees from the hazards of entry into a permit required confined space.

6.2 Glossary

The definitions of the glossary in this section have been taken from OSHA 29 CFR 1910.146 (b)

Attendant means an individual stationed outside one or more permit spaces who monitors the authorized entrant and who performs all attendant duties assigned in the employer's permit space program.

Authorized entrant means an employee who is authorized by the employer to enter a permit space.

Confined Space means a space that:

- is large enough for an employee to physically enter and perform work,
- has limited or restricted means of entry or exit, and
- is not designed for continuous employee occupancy.

Entry means the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of the opening into the space.

Entry Permit means the written or preprinted document that is provided by the employer to allow and control entry into a permit space.

Entry Supervisor means the person (such as the Rig Manager) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

Hazardous Atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairments of ability to self-rescue (that is escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

- (1) *Flammable gas, vapor, or mist* in excess of 10 percent of its lower flammable limit (LFL);
- (2) *Airborne combustible dust* at a concentration that meets or exceeds its LFL;
Note: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet.
- (3) *Atmospheric oxygen concentration* below 19.5 percent or above 23.5 percent.
- (4) *Atmospheric Concentration I* of any substance for which a dose or a permissible exposure limit is published in Subpart G, OSHA, or in Subpart Z, Toxics and Hazardous Substances, of this Part and which could result in employee exposure in excess of its dose or permissible exposure limit.
- (5) *Any other atmospheric condition* that is immediately dangerous to life or health.

Immediately dangerous to life or health (IDLH) means any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space. **Non-permit confined space** means a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Permit-required confined space means a confined space that has one or more of the following characteristics:

- (1) *Contains or has the potential to contain a hazardous atmosphere.*
- (2) *Contains a material that has the potential for engulfing an entrant.*
- (3) *Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section; or*
- (4) *Contains any other recognized serious safety or health hazard.*

6.3 Permit-Required Confined Spaces

The following is a list of Permit-required confined spaced on a Phoenix Drilling Location. An Operator's Policy may list one or more permit-required confined spaces. Always follow the stricter policy.

Entry into Earth Pits is prohibited.

6.3.1 Cellar (post nipple up)

Potential Hazards: The employees could be exposed to the following:

- *Engulfment*
- *Presence of toxic gases.* If Hydrogen Sulfide is equal to or more that 10ppm measured as an 8-hour time-weighted average. If other toxic gases are suspected, specific monitoring devices shall be used.
- *Presence of explosive/flammable gases.* Equal to or greater than 10% of the lower flammable limit (LFL).
- *Oxygen Deficiency.* A concentration of oxygen in the atmosphere equal to or less than 19.5%.

Control of Hazards:

- *Mechanical Ventilation.* A Third Party Safety Company must be called to the site to install fans, blowers or other equipment that can and will eliminate the Atmospheric and Engulfment Hazards.
- *Testing.* The Rig Manager must use the supplied monitor device to continually test the lower level of the cellar using the supplied hose. The data collected from the monitoring device must be transcribed onto the Entry Permit. He, by signing the Entry Permit, must state that the atmosphere is clear and safe to work in. All affected employees may, at any time, review any of the test results.

Permit:

- The permit shall specify the entrant's name, The Date and Time of the job, the atmospheric levels, work location, emergency numbers and Rig Manager's signature.
- The Permit will expire if:
 - any changes in the space causes the entry to be terminated.
 - At the end of the tour.

Attendant:

- The Rig Manager shall be the attendant for employee entering the space.

Entry Procedure:

- If no atmospheric hazards exist, the entrant may enter the space, provided that a JSA is attached to an Entry Permit that has been conducted. The Rig Manager will be the attendant. If Hot Work is needed, an Additional Hot Work Permit must be conducted. **Any change in the space causes the entry to be terminated.**
- Should a hazard arise, the entrant must evacuate the space and the entry permit must be marked "Terminated" and filed with the Division Safety Department. The Operator and Safety Department must be notified of the Hazardous Atmosphere. A Third Party Safety Company must come to the site and install Safety Equipment or PPE before anyone may enter the space. **Any change in the space causes the entry to be terminated.**

Rescue:

- Call 911 and activate emergency personnel. Only Trained and Qualified Personnel may rescue a person in the space.

6.3.2 Suction, Working, or Mixing Pits

Potential Hazards: The employees could be exposed to the following:

- *Engulfment*
- *Presence of toxic gases.* If Hydrogen Sulfide is equal to or more than 10ppm measured as an 8-hour time-weighted average. If other toxic gases are suspected, specific monitoring devices shall be used.
- *Presence of explosive/flammable gases.* Equal to or greater than 10% of the lower flammable limit (LFL).
- *Oxygen Deficiency.* A concentration of oxygen in the atmosphere equal to or less than 19.5%.
- *Any unknown material that was used on the previous well.*

Control of Hazards:

- *PPE:* The entrant must have a full body construction style harness, equipped with no less than a 50ft. lifeline. The

attendant must have one end of lifeline in his hands the duration of the time that the entrant is in the space.

- *Mechanical Ventilation.* A Third Party Safety Company must be called to the site to install fans, blowers or other equipment that can and will eliminate the Atmospheric and Engulfment Hazards.
- *Testing.* The Rig Manager must use the supplied monitor device to continually test the lower level of the cellar using the supplied hose. The data collected from the monitoring device must be transcribed onto the Entry Permit. He, by signing the Entry Permit, must state that the atmosphere is clear and safe to work in. All affected employees may, at any time, review any of the test results.

Permit:

- The permit shall specify the entrant's name, The Date and Time of the job, the atmospheric levels, work location, emergency numbers and Rig Manager's signature.
- The Permit will expire if:
 - any changes in the space causes the entry to be terminated.
 - At the end of the tour.

Attendant:

- The Rig Manager shall be the attendant for employee entering the space.

Entry Procedure:

- If no atmospheric hazards exist, the entrant may enter the space, provided that a JSA is attached to an Entry Permit that has been conducted. The Rig Manager will be the attendant. If Hot Work is needed, an Additional Hot Work Permit must be conducted. **Any changes in the space cause the entry to be terminated.**
- Should a hazard arise, the entrant must evacuate the space and the entry permit must be marked "Terminated" and filed with the Division Safety Department. The Operator and Safety Department must be notified of the Hazardous Atmosphere. A Third Party Safety Company must come to the site and install Safety Equipment or PPE before anyone may enter the space. **Any changes in the space cause the entry to be terminated.**

**6.3.3 Water Tank
Potential Hazards:**

The employees could be exposed to the following:

- *Engulfment*
- *Presence of toxic gases.* If Hydrogen Sulfide is equal to or more than 10ppm measured as an 8-hour time-weighted

average. If other toxic gases are suspected, specific monitoring devices shall be used.

- *Presence of explosive/flammable gases.* Equal to or greater than 10% of the lower flammable limit (LFL).
- *Oxygen Deficiency.* A concentration of oxygen in the atmosphere equal to or less than 19.5%.
- *Any unknown material that was used on the previous well.*

Control of Hazards:

- *Mechanical Ventilation.* A Third Party Safety Company must be called to the site to install fans, blowers or other equipment that can and will eliminate the Atmospheric and Engulfment Hazards.
- *Testing.* The Rig Manager must use the supplied monitor device to continually test the lower level of the cellar using the supplied hose. The data collected from the monitoring device must be transcribed onto the Entry Permit. He, by signing the Entry Permit, must state that the atmosphere is clear and safe to work in. All affected employees may, at any time, review any of the test results.

Permit:

- The permit shall specify the entrant's name, The Date and Time of the job, the atmospheric levels, work location, emergency numbers and Rig Manager's signature.
- The Permit will expire if:
 - any changes in the space causes the entry to be terminated.
 - at the end of the tour.

Attendant:

- The Rig Manager shall be the attendant for employee entering the space.

Entry Procedure:

- If no atmospheric hazards exist, the entrant may enter the space, provided that a JSA is attached to an Entry Permit that has been conducted. The Rig Manager will be the attendant. If Hot Work is needed, an Additional Hot Work Permit must be conducted. **Any changes in the space cause the entry to be terminated.**
- Should a hazard arise, the entrant must evacuate the space and the entry permit must be marked "Terminated" and filed with the Division Safety Department. The Operator and Safety Department must be notified of the Hazardous Atmosphere. A Third Party Safety Company must come to the site and install Safety Equipment or PPE before anyone may enter the space. **Any changes in the space cause the entry to be terminated.**

6.4 General Requirements

- NO PHOENIX DRILLING EMPLOYEE MAY ENTER A PERMIT-REQUIRED CONFINED SPACE WITH OUT A COMPLETED ENTRY PERMIT THAT HAS BEEN FOLLOWED AND SIGNED BY THE RIG MANAGER OR OPERATOR REPRESENTATIVE... Employees and Rig Managers that break this policy will be reprimanded by a written warning or immediately terminated depending on the severity.
- All permit-required confined spaces shall be labeled with a sign reading "DANGER --- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" or other similar language.

Entry into confined spaces presents personnel with special hazards including potentially oxygen-deficient atmospheres, the presence of toxic or flammable vapors, and restricted access or exit in the event of an emergency.

Entry into confined spaces must require the following:

1. A (JSA) including all information regarding the confined space to be entered. This must include a policy and procedures that the Operator enforces.
2. A Phoenix Drilling Entry Permit signed by the Rig Manager.
3. An emergency list of local emergency personnel must be posted close to the site.
4. All employees must have the proper PPE that the space requires. This may include, but not limited to:
 - Hardhat, Safety Glasses, Steel Toed boots/shoes
 - Quad-gas Monitor or similar equipment to monitor the air the entire job. It must include an audio and visual alarm.
 - Communications equipment if the entrant is unable to hear the voices of the attendant.
 - Rescue equipment meeting compliance for this standard

All equipment will have documented inspection/certification records.

5. Coordination with the Operator

A copy of the JSA, Entry Permit must be at the location during the job. Provide a copy of the JSA and Closed Entry permit to the Operator at the end of the job.

7.0 Electrical Safety

7.1 Inspections

Electrical components, lines, generators, breaker boxes and electrical tools must be visually inspected before each use.

Always check for:

- Missing grounding cables
- Cracks or splices in the lines.
- Cracks or worn plugs
- Water around the electrical boxes
- Worn or defective insulation

All electrical cables must be secured in a way that allows them to be suspended off the ground and high enough in some areas that a transport truck can easily pass under them with 10 feet of clearance. If the electrical line is on the ground, they must be placed into a cable tray.

7.2 Static Electricity

Static electricity is generated any time liquid or solid substances are flowed, splashed, sprayed, or agitated. Control of the generation and accumulation of static charges is necessary to eliminate the spark hazard of static electricity. To eliminate any hazards, keep items grounded at all times.

7.3 Tanks

Metal storage tanks shall be grounded to an earthen ground. The inlet nozzle to storage tanks shall have a down-corner on the inside that terminates 6 inches from the bottom. Ensure the metal gauge line is touching the thief hatch before lowering the line into the tank during gauging operations. Fiberglass shall be used as a storage tank only if the following four conditions are met:

1. The liquid being stored is not flammable and has a resistance to Current flow less than 1 Meg ohm/cm.
2. The inlet nozzle down comer terminates 6 inches from the bottom of the tank.
3. The vapor/gas-air space is kept out of the flammable limits.
4. And all metallic parts of the fiberglass tank are bonded together and are grounded.

Above ground piping containing flammable liquids or vapor/gas shall be made of steel. Gas blowing from vent pipes shall not impinge on non-conductive surfaces. Conductive surfaces that are impinged by venting gas shall be bonded to the vent piping.

7.4 Tank Trucks

Tank trucks shall be bonded to the storage tank before the transfer line is connected. The transfer line shall be disconnected before the bond is disconnected.

7.5 Moving the Rig

On days that the rig will be moving to another location, the following steps shall be followed.

1. Before electrical lines and components are rigged down, the main power shall be shut off.
2. After the main power is locked and tagged in the off position, roll up all electrical line and store them in an area that is free from sharp or heavy objects.
3. When the rig meets its destination at the new location, roll out all electrical cables and lines. While the power is still off, visually inspect all lines.. If any item is damaged, the item must be repaired by a qualified electrician before the item may have power.
4. When installing the flexible cables, ensure that you do not pull the cord by the plugs. This will cause the cable to weaken at the plug and pose electrical hazards.
5. After you have plugged all flexible cables into the corresponding receptacles, ensure that all lines are above ground.
6. If grounding rods and cables are not installed by this time, install those first before starting generator.

7.5.2 Electrician Procedures

Refer to section 20.1 Electrical Lock Out/Tag Out Procedures.

7.6 Rig Grounding

The Following equipment shall be grounded and comply with the National Electric Code Article 250, unless pre-empted by other governmental regulations:

- The Unit
- The #1 Pump
- The #2 Pump
- Any Pill Pits or Steel Pit system
- The Swivel Motor
- The Generator
- The Accumulator
- Any Living Quarters Trailer
- Any equipment that is connected to live electricity.

Grounding shall consist of the following.

1. 2 (two) 10 (ten) foot grounding post in shall be placed into the ground 8 (eight) feet on the left and right side of the generator shack.
2. A single 4-gauge grounding cable must be attached on one of the main grounding post in the generator shack and the other end shall be attached to both grounding cables.
3. All equipment must be attached together so that a common ground is achieved.

All breaker boxes on a Phoenix Drilling Location must:

- Have each breaker labeled.
- Must remain closed when not in use.
- Must have a rubber mat on the floor in front of it.

7.8 Trailers on location

Any trailer that is on location and need power supplied by the Phoenix Drilling Power Plant must have proper ground and have their flexible cable protected by cable.

If a flexible cord does not have a proper plug that fits a Phoenix Drilling Electrical Panel, it must be repaired to correspond, or power cannot be issued to this cord.

7.9 Working on Electrical Equipment

Only a Qualified Third-Party Electrician shall work on any electrical equipment on any Phoenix Drilling location.

8.0 Emergency Response

8.1 Evacuation Plans

Refer to *Addendum 4*.

8.2 Rig Fire Contingency Plan

Refer to *Addendum 5*.

8.3 Spill Response Plan

8.3.1 Control

Immediate actions to control a spill (oil, drilling fluids, etc.) are very important as the extent of damage and the clean-up can be directly proportional to the volume of the spill. The first responsibility of Phoenix personnel in the event of a spill is to locate the source and stop the flow.

Extreme caution and appropriate safety procedures must be used for spills of hazardous substances or oil containing H₂S. Also, precautions should be taken for potential fire hazards. If the spill involves a suspected hazardous substance, the rig manager shall refer to the appropriate Material Safety Data Sheet (MSDS) or shipping manifest to determine the type of substance and its characteristics. Drilling personnel must be thoroughly familiar with the drilling rig layout; especially the mud pit system and all storage tanks.

Employees are NOT trained to clean up any spill or leak that requires more than 201bs of absorbent materials. Any spill larger than this shall require a Third Party Clean up Crew.

8.3.2 Internal Reporting

- Any employee that spots a spill must report the spill or leak to their Rig Manager.
- The Rig Manager will take the appropriate actions to stop the source of the spill.

- The Rig Manager will report the spill to the Drilling Superintendent managing the rig.

9.0 Environmental Policy

Phoenix Drilling will conduct business with respect and care for the environment in which we operate. We will achieve incident free operations by:

Minimizing the environmental impact of our activities by:

- Assessing the environmental sensitivity and the impact of our operations on the local, regional, and global environments.
- Limiting physical disturbance at our drilling locations.
- Ensuring responsible and efficient uses of energy.
- Limiting and handling waste in a responsible manner.
- Reduce spills, leaks, and accidental discharges by inspecting equipment and operating that equipment responsibly.
- Always reviewing response plans and capabilities.

Phoenix Drilling keeps open communication on company environmental performance by:

- Driving towards environmental excellence.
- Keeping communication open with interested parties concerned to increase knowledge of the effects of our operations.
- Being responsive to the public attitude and concerns.

Manage environmental performance by:

- Addressing environmental concerns.
- Developing goals and standards
- Committing means and resources to meet our goals and meet standards to comply with applicable laws and regulations.
- Ensuring all employees are trained to fulfill their duties and trained to report any incidents.
- Ensuring inspections, audits, and any reviews are corrected and carried out.
- Encouraging other contractors, supplies and customers to conduct their operations with the environment responsibilities.

Improve environmental performance of Phoenix Drilling by:

- Company Development
- Enhance employee understanding
- Commitment

10.0 Fire Safety Program

All accidental fires on company property, no matter how small, must be reported immediately to the manager. The Phoenix Drilling Incident Report shall include all known or reasonable surmised details as an additional report may be required by governmental agencies.

10.1 Fire Prevention

The prevention of fires is of utmost importance.

1. Good housekeeping and equipment maintenance must be followed to keep fire hazards at a minimum. The area should be kept free of combustible debris.
2. Oily waste or oil-soaked clothing must be properly disposed of because of the possibility of spontaneous combustion.
3. The use of gasoline as a cleaning agent is prohibited. The only flammable liquids approved for use in cleaning machinery are kerosene and varsol. The liquids should not be used on hot metal surfaces or sprayed around operating machinery where there is a source of ignition. Hydrocarbon resistant rubber gloves should be worn to protect the hands.
4. Gasoline, kerosene, or other flammable liquids must not be stored in glass containers or unapproved plastic containers. Only approved safety cans may be used to store, to transport gasoline or solvents.
5. Oil & diesel from leaks should not be burned. This leakage should be cleaned up and disposed of in a prescribed manner.
6. Lines containing hydrocarbons or combustible materials under pressure must not be fired to remove ice or paraffin plugs.
7. All flammable hydrocarbon leaks should be reported and repaired immediately, if practical. If immediate repair is not possible, adequate warning signs must be posted and extra precautions against fires instituted.
8. Because paint, insect sprays, aerosol sprays, and most paint removers are usually flammable, they should not be used near open flames or other sources of ignition. Read the labels of the containers.

10.2 Fire Extinguishers

Each Phoenix Drilling rig shall have at a minimum one 20lbs. ABC Rated Fire Extinguisher at each of these stations:

- Mud Pump
- Next to Accumulator
- Next to the Generator
- Next to the Drilling Floor
- Next to the Floor Motor

- Accessible area while you are on the ground and mounted to the unit.

10.2.1 Using a Fire Extinguisher

If a fire has erupted, use 1 (one) 20 lbs. Fire Extinguisher to extinguish the flame. IF the fire does not go out, evacuate the area and yell "FIRE!!" so that other may evacuate as well to the safe briefing area.

Remember the "PASS" Method.

P — Pull the pin from the nozzle.

A — Aim the Fire Extinguisher at the base of the flame.

S — Squeeze the trigger to release the components.

S — Sweep the Fire Extinguisher from side to side to ensure all the components are not Setting at the bottom.

10.2.2 Fire Extinguisher Inspection and Maintenance

- Inspection and maintenance of all fire extinguishers must be performed by a competent inspector in accordance with applicable regulatory and company requirements.
- If a fire extinguisher is used, or has been discharged, remove it from its location and return it to the Rig Manager's trailer.
- Fire extinguishers should be kept filled and maintained according to manufacturer's instructions to ensure operation at top efficiency the instant they are used.
- An empty, used or defective fire extinguisher must not be re-hung until it has been serviced or repaired.
- Each extinguisher must have durable tag securely attached to show the maintenance or recharge must be replaced with spare extinguishers.
- Welding on the outer shell of a fire extinguisher is prohibited unless done by an American Society of Mechanical Engineer (ASME) Coded welder.

10.3 Fire Drills

Fire drills should be held at regular intervals to familiarize personnel with the location and operation of fire extinguishing equipment. They must include:

1. An alarm either vocal or mechanical.
2. A muster point
3. A head count

11.0 First Aid/ CPR

- All Phoenix Drilling employees will be trained in Medic First Aid/CPR yearly by a trained Medic First Aid Facilitator.
- No Phoenix Drilling employee will ever be required to perform CPR unless he/she is confident in themselves to provide the services correctly.

11.1 First Aid Equipment

- All Phoenix Drilling Rigs will be equipped with a First Aid kit inside the Top Doghouse and will be periodically inspected and kept up to date.
- The contents of the first aid kits must be selected based on the job and associated hazards and must be able to handle the accurate amount of people on the job.

11.2 Artificial Respiration

Mouth to Mouth (nose) Technique:

1. Position victim on his/her back. If it is necessary to roll the victim over, try to keep the back. If it is necessary to roll the victim over, try to keep the back and neck straight. This will avoid aggravation of any possible spinal injury. Kneeling at the victim's side, tilt the head back so chin is pointing up. Do this by placing open hand under the neck and the other hand on the forehead.
2. Quickly glance in victim's mouth for any obstruction. If an obvious obstruction is present, carefully turn the victim on the side; tilt the head down, and sweep mouth out with your fingers. When the mouth is clear, reposition the victim and tilt the head back.
3. Check for breathing by bending over the victim and placing your ear close to victim's mouth and nose.
4. If no breathing is present, pinch the nose closed with the hand that is resting on the forehead, form an air-tight seal by placing your mouth over the victims mouth, and breathe into the victims mouth until chest rises.
5. Breathe 2 quick breaths in the victim and watch for the rise and fall of the chest. If you feel, hear, or see no air exchange, re-tilt the head and try again. If you still feel no air exchange, again sweep the mouth. If there still is no air exchange apply a quick backward and upward thrust with the hand placed high in the center of the abdomen just below the breastbone.
6. Repeat breathing. Remove each time to allow air to escape. Repeat 12 times per minute. Use deep breaths. As the victim begins to breathe maintain head tilt.

11.3 Heavy Bleeding

Loss of blood from heavy bleeding can kill an injured person in 3 to 5 minutes. Do not waste time. Never use a tourniquet except in case of extreme emergency, such as amputation.

- Place a compress bandage, clean handkerchief, or clean cloth over the wound and press firmly with one or both hands. If you do not have a bandage or pad, close

the wound with your hand and fingers. If an ideal sterile pad or dressing is not immediately available, use your bare hand or fingers until a clean dressing is found. Do not waste valuable time searching for an ideal dressing. The patient may bleed to death before it can be found. A possible infection can be treated later.

- Apply pressure directly over the wound. If this does not stop the bleeding use a pressure point above the wound.
- Hold the bandage or pad firmly in place with bandage ties, necktie, or cloth strips. Use a 2 or 4 inch compress bandage from your first aid kit. Remember that it may require a considerable amount of pressure to stop and prevent recurrence of severe bleeding. Avoid large bulky dressings which could hide continued bleeding while becoming saturated with blood. Raise the bleeding part higher than the rest of the body, unless bones are broken. Call physician if convenient. Otherwise, transfer immediately to a medical facility. After bleeding has stopped, keep the victim warm. Cover with a blanket, coat, etc. and put something underneath if victim is on a cold damp surface.

11.4 Shock

- Lay victim flat and elevate the legs. If bleeding is present determine its source and stop the bleeding in the usual ways, preferably by direct pressure on the bleeding site.
- Clear victims' mouth of all foreign bodies.
- Be sure tongue is forward and not blocking windpipe.
- Loosen tight clothing at neck, chest and waist and make the patient as comfortable as possible.
- Chilling of the patient should be avoided but be careful to avoid overheating. Application to head may cause shock to become more severe. If victim is nauseated and vomits, turn the head to one side. Clear and maintain an open airway. Keep mouth and face wiped clean.
- As soon as the patient is stabilized, transport quickly as possible to a physician's office or hospital emergency room where definite treatment is available.
- Do not give alcoholic beverages of any kind!! Never attempt to administer fluids or oral medications to an unconscious patient.
- If victim is unconscious, a stimulant may be given by inhalation: break on ampoule or spirits of ammonia or pour it on a piece of cloth. Pass it under the victim's nose for 3 to 4 seconds every 5 minutes. Getting victim to inhale oxygen is often helpful in cases of shock.
- Be reassuring and calm with soothing words. Continue treatment as long as there is evidence of shock.
- Keep victim lying down and quiet. Persons in shock tend to relapse, especially if they attempt to sit up or stand.

11.5 Classification and Treatment for Burns

Emergency or first aid treatment of burns or scalds should primarily be: 1) exclusion of air from the burned area, 2) relief of the pain that immediately follows burns, 3)

minimizing the onset of shock, and 4) the prevention of infection. Get victim to a physician as soon as possible.

Burns are classified by the degree of injury to body tissue as follows:

First-Degree	The outer skin is reddened, there is slight swelling.
Second-Degree	The under skin is affected and blisters form.
Third-Degree	The skin is destroyed and some tissues underneath are damaged. In severe cases muscles, nerves, and blood vessels may be destroyed, and the whole area charred.

The seriousness of a burn or scald is influenced by the extent of the body surface involved, as well as by the depth or thickness of the tissues that are penetrated. Shock is chiefly responsible for deaths that occur during the first day or two after burns. Improved medical treatment has increased the chances of survival from severe burns.

11.5.1 First Degree Burn

- Apply cold water applications or submerge the burned area in cold water (not ice water) for no more than 15 minutes.
- Apply a dressing, if necessary.

11.5.2 Second Degree Burn

- Immerse the burn part in cold water (not ice water) until the pain subsides, but not more than 15 minutes.
- Apply freshly ironed or laundered clothes that have been wrung out in ice water.
- Blot dry, gently.
- Apply dry, sterile gauze or clean cloth as protective bandage.
- Do not break blisters or remove tissue.
- Do not use an antiseptic preparation, ointment, spray, or home remedy on a severe burn.
- If the arms or legs are affected, keep them elevated.
- Treat for shock, if necessary.

11.5.3 Third Degree Burn

- Remove all clothing from the injured area. Cut around any that adheres to the skin and leave it in place.
- Cover burns with thick, sterile dressing or a freshly ironed or laundered sheet or other household linen.
- If the hands are involved, elevate them to a comfortable position.
- Keep burned feet or legs elevated. Do not allow the victim to walk.
- Victims of face burns should be kept under close observations for breathing difficulty. If respiration problems develop, an open airway must be maintained.
- Do not immerse an extensively burned area or apply ice water over it, since it may intensify the shock reaction.
- Arrange transportation to a medical facility as quickly as possible.
- Do not apply ointment, commercial preparations, grease, or home remedies which may cause further complications and interfere with treatment by the physician.

- Treat for shock.

11.5.4 Chemical Burn

- Chemical burns are caused by the chemical reaction of a toxic agent on the skin. Tissue damaged will continue until the reaction ceases or the chemical is removed.
- Remove all contaminated clothing, especially shoes and socks.
- Flush the involved area with large amounts of water. Use a shower, garden hose, water jug, etc.
- Continue flushing with water en-route to the medical facility.

11.5.5 Burns of the Eye from Chemical

Frequently chemical substances, such as lime, cement, caustic soda, acids, or alkalis from storage batteries, get into the eye. The treatment is to flush the eye freely with clean water. If eye wash facilities are available, have victim use them holding eyes open for at least 15 minutes. Otherwise, pour water and wash the eye thoroughly, make sure the water actually flows across the eye. After the eye has been washed, apply a clean dressing. Chemical burns of the eye should receive the attention of any eye specialist as soon as possible.

11.5.6 Electrical Burn

- Shut the Main Power Breaker to the Off Position.
- Remove victim from contact with electrical current, without endangering yourself
- Cardiopulmonary arrest is often concurrent with the burn. Begin CPR if necessary. Remember that resuscitation has priority over other first aid procedures.
- Locate entrance and exit points of electrical current.
- Cover burned area with sterile cloth.
- Transport the victim to a medical facility as soon as possible. Electrical burns may be much more serious than they appear on the surface, since deeper layers of skin, muscles, and internal organs may be damaged. A deep, full electrical burn to the feet usually results in some permanent loss of function.

11.6 Venomous Snake Bites

The following is recommended as first aid procedures:

- Keep the victim quiet and still. Unnecessary motion, especially of the bitten area, tends to spread the venom.
- Apply a lightly constricting band above and below the snake bite. Do not obstruct the blood supply.
- Transport the victim to a medical facility as soon as possible in a safe manner, taking care not to move victim any more than necessary.
- Treat for shock.

Moving the Injured

Do not move an injured person before a physician or experience ambulance crew arrive, there is danger of receiving further injury by being left at the accident site. If possible, control bleeding, maintain breathing, and splint all limbs that appear fractured before moving. If this not possible, follow these general rules.

1. Pull injured person head first or feet first. Do not pull sideways. Make certain the head is protected.
2. If injured person must be lifted for a check for injuries, support every part of the body.
3. Keep body in a straight line-not bent.
4. If carrying the injured person to an area where a stretcher can be manipulated, use either the one or two or three man carry, depending on the type and severity of the injury, available help, and physical surroundings.
5. The one and two man carry systems are best for transporting a person who is unconscious from asphyxiation or drowning, but are not suited for carrying a person suspected of having fractures or other severe injuries. In these cases, always use the three man carry method.

11.7 Unconscious Employees

1. Call 911 first and report your location.
2. Check for a pulse.
3. Check for breathing.
4. Check for a clear airway.
5. If circulation and breathing is absent, perform CPR until EMS Arrives.

12.0 Forklifts

Phoenix Drilling employees will be trained in the safe practices of using a forklift at the expense of the operator requiring the forklift.

No other person may operate that forklift unless trained to do so by a Qualified Forklift trainer at the expense of the operator requiring a forklift.

13.0 HAZCOM

13.1 Purpose

The purpose of the HAZCOM Program is to ensure that the hazards of all chemicals at any Phoenix Drilling Location are evaluated, and that all the hazards associated with that chemical are expressed to the employee. This will be achieved by:

- Hazard Communication Training
- Safety Data Sheets at each Phoenix Drilling Location
- and ensuring that all chemicals are labeled.

The Phoenix Drilling, HAZCOM program is in accordance with the requirements of OSHA 1910.1200 CFR.

13.2 General Rules

1. All chemicals will be kept in proper containers, prominently labeled.
2. Always determine exactly what chemical you are using and know all of the precautions that are necessary to prevent injury.
3. All chemical containers shall have a safe means of removing the chemicals without excessive splash, spray or other uncontrolled contamination of the surroundings.

13.3 Eye Protection

In the event that any chemical gets in the eyes of an employee, use as many clean, clear, eye wash bottles as it takes to keep a constant flow of liquid in the eyes for 15 minutes. Clean water is suitable for flushing the eyes, unless stated otherwise on the SDS Sheet for the chemical the employee is exposed to. The exposed employee shall seek medical attention immediately.

To prevent eye exposure, always wear a full-face shield and chemical goggles when handling or mixing chemicals.

13.4 Respiratory Protection

If toxic or irritating gases, fumes, vapors or dust are likely to be breathed into the lungs, suitable air masks, respirators to other protective breathing equipment shall be worn

13.5 Skin Protection

If skin contact occurs, immediately flood the affected area with large quantities of water. Remove the clothing if necessary so water will reach the affected area. Be certain that clothing is not contaminated prior to redressing. Contact the Safety department immediately.

To prevent skin exposure, always wear approved rubber mixing gloves when handling or mixing chemicals.

14.0 HAZWOPER

Phoenix Drilling will train all employees to:

- Follow the Operator's policy and procedures
- Be aware of any spill or leak
- Report any leak or spill to their Rig Manager
- Call any emergency department when applicable

Employees are NOT trained to clean up any spill or leak that requires more than 20lbs of absorbent materials.

15.0 Hydrogen Sulfide

Hydrogen sulfide is one of the most potentially lethal hazards found in the oil and gas industry. Phoenix Drilling intends to make every effort to provide adequate safeguards against harm to persons both on location and in the immediate vicinity from the effects of H₂S released to the atmosphere. In those areas where H₂S is common, the following safety procedures/policies shall be in effect.

15.1 Training

1. All Phoenix Drilling Employees shall be trained and made familiar with the ventilation equipment, prevailing winds, briefing areas, warning systems, and evacuation procedures where appropriate.
2. All Phoenix Drilling Employees shall be educated in basic first-aid procedures applicable to victims of H₂S exposure. During subsequent on-site training sessions and drills, emphasis shall be placed upon rescue and first-aid for H₂S victims.
3. The training is to consist of the following:
 - a. Introduction
 - * Definition
 - Dangers of H₂S
 - Properties of H₂S
 - Physical Effects
 - Sources of H₂S
 - b. Hydrogen Sulfide Detection
 - * Types of Equipment
 - * Detector use in the field
 - c. Protective Breathing Equipment
 - * Types of Equipment
 - * Practical exercise in the use of Phoenix owned equipment
 - d. Safety Precautions to be used
 - e. Emergency Procedures
 - f. Written Examination

While on location during normal working conditions employees shall abide by the following rules.

- A Phoenix Drilling employee will designate an upwind briefing area where any personnel on location can assemble for a "tailgate" safety meeting or to meet in the event of an emergency situation.

- A designated vehicle with ample fuel will be facing an exit with nothing blocking the path, in case of an emergency.

15.2 Safety Precautions

1. Stay upwind of any escaping gas. Be alert to any wind direction changes.
2. OBSERVE AND OBEY all warning signs on location.
3. Smoking, open flames, etc., is prohibited where gas is present or in a NO SMOKING AREA.
4. If at any time a job is considered to be hazardous, shut down operations and contact the Company Representative in charge of the job or a Phoenix Supervisor.

15.3 Escaping a Hydrogen Sulfide Area

In the event of escaping gas or a hydrogen sulfide emergency, these procedures should be used:

1. Immediately go to the upwind briefing area and determine if all crew members and other personnel working on the location are safe and accounted for.
2. Notify the Company Representative and the Rig Manager as soon as possible.
3. Under no circumstances attempt to rescue anyone that has been overcome by gas *unless you are comfortable* wearing fresh air breathing equipment while making the rescue.
4. After protective breathing equipment is in use, move any victims to a safe location upwind from the H₂S source.
5. If the victim is unconscious and not breathing, CALL 911. Take the instructions from the 911 dispatch until EMS arrives.
6. After a victim is revived do not leave him alone. H₂S victims can be irrational or suffer other complications from H₂S exposure.
7. All H₂S victims should receive medical attention. Keep victims under observation until examined by a doctor.
8. Keep everyone away from the scene of the H₂S danger until supervisory personnel can take charge of the location.

15.4 Physical Properties & Toxicity

0.13 ppm:	Minimal perceptible odor
4.60 ppm:	Easily detectable, moderate odor
10 ppm:	Beginning eye irritation
27.0 ppm:	Strong, unpleasant odor, but not intolerable
100 ppm:	Coughing, eye irritation, loss of sense of smell after 2-5 minutes
200-300 ppm:	Marked conjunctivitis (eye inflammation) and respiratory tract irritation after one hour of exposure. Becomes (IDLH)
	Immediately Dangerous to Life and Health
500-700 ppm:	Loss of consciousness and possibly death in 30 minutes to one hour
700-1000 ppm:	Rapid unconsciousness, cessation (stopping or pausing) of respiration, and death

1000-2000 ppm: Unconsciousness at once, with early cessation of respiration death in a few minutes. Death may occur even if individual is removed to fresh air at once.

REMEMBER: **All of the effects depend on Exposure Limit and the duration of exposure**

15.5 Exposure Limits

Permissible Exposure Limit (PEL) Established by OSHA: 10ppm

Short Term Exposure Limit (STEL) Established by OSHA: 15ppm

16.2 Rig Inspections

All rigs must inspect the entire rig at the increments:

1. **Rig Up** — At rig up, the rig must be inspected by the Rig Manager using a Phoenix Rig Inspection Form. Any items that are considered to be "Bad", "Questionable", missing, or contain a defect, must be abated at this time. If there is not possibility to correct the item before spud, the item must be locked and tagged in the de-energized position.
2. **Visual** — The Rig Manager must conduct a visual inspection of the rig daily. .
3. **Nipple Up** — As soon as the rig has completed the Nipple Up Operation, the rig must be inspected by the Rig Manager using a Phoenix Rig Inspection Form. Any items that are considered to be "Bad", "Questionable", missing, or contain defect, must be abated at this time. If there is not possibility to correct the item, the item must be locked and tagged in the de-energized position until fixed.

16.3 Drilling Line

Drilling line will be inspected daily by each crew by a competent person. If the drilling line has any frayed wires, the line must be slipped before any other operation.

16.4 Fall Protection

Fall Protection will be inspected before each use. Also refer to 21.6

16.6 Electrical

All rigs must inspect the electrical components at the increments:

4. **Rig Up** — At rig up, all flexible electrical cords, Portable Cords, and Extension Cords must be stretched out and visually inspected.. Any external defects must be corrected before any electrical can pass through any of the flexible cords. Defects will include, but not limited to:
 - a. Deformed or missing pins
 - b. Any damage to the out insulation of cables
 - c. Loose Parts
 - d. Pinched or crushed outer insulation
 - e. Internal wire showing
5. **Visual** — The Rig Manager must conduct a visual inspection of all flexible electrical cords, Portable Cords, and Extension Cords, Plugs and Connectors daily on their rig. Ensure that no cable is on the ground and his hung above ground by insulated hangers.

17.0 Job Safety Analysis (JSA)

Each and every Phoenix Drilling employee that is working on location will actively be involved in a Job Safety Analysis (JSA), before each job is started. The JSA must break down the job and identify items that could pose harm to personnel, the environment, and equipment. Once the JSA is reviewed, it must be placed in an area that can be viewed at all times during the job.

17.1 JSA Steps

1. Select JSA from electronic tablet or hand write if tablet is not available.
2. Identify the hazards for each step.
3. Document ways to eliminate the hazards.
4. Review the JSA and ensure that you have answered the questions of
 - i. Who?
 - ii. What?
 - iii. When?
 - iv. Where?
 - v. How?
5. Meet at the job location or in the doghouse and talk about the job to be performed. Remember to include everyone on location in the JSA Process.
6. See Attachment #4 for a blank JSA (only use if unable to find compatible jsa on electronic tablet)

18.0 Lockout / tagout

A Lock-out/Tag-out system is required when equipment capable of producing energy is placed out of service for repairs. The lock out system must be capable of preventing unauthorized startup of the equipment being serviced.

Lock-out/Tag-out procedures will be used when working on any machinery or equipment that has any moving parts.

18.1 Electrical Equipment LO/TO Procedure

Before a Qualified electrician conducts work on any electrical equipment, complete the following steps:

1. Conduct a JSA with the Qualified Electrician and explain the job at hand.
2. Go to the energy source of the item that the electrician will be conducting work and LO/TO the power to that item.
3. The Rig Manager must add his lock to the Lock Out Device.
4. The Qualified Electrician must add a Lock to the Lock Out Device.
5. Try the equipment. See if the Lock Out device is installed properly. If it is installed properly, you won't be able to turn any power on to the equipment that is being worked on.
6. Conduct the work on the equipment.
7. When the job is completed, clean the area.
8. Inform everyone that the Lock Out Devices are about to be removed.

9. Remove Lock Out devices.
10. Resume operations.

18.2 Engine LO/TO Procedure

18.2.1 Air Start Engine

1. Conduct a JSA with everyone on location about the job at hand.
2. Go to the engine and shut it down.
3. Turn the 1" ball valve handle on the starter to a 90 degree angle and ensure that it is in the off position.
4. Add the Lock Out device on the handle of the 1" ball valve.
5. Everyone that will be working on the engine shall add a lock and a tag to the lock out device on the starter.
6. The Rig Manager must ensure that everyone is clear of the area and attempt to start the motor.
 - If he can crank the starter, reinstall the lock out device.
 - If he cannot start the engine, and he feels that a good lock out has been achieved, then he must add his own lock to the lock out device.
7. Conduct the work on the equipment.
8. When the job is completed, clean the area. Remove all tools and equipment from the engine area.
9. Inform everyone that the Lock Out Devices are about to be removed.
10. Everyone that added a lock must remove their lock and tags from the lock out device.
11. The Rig Manager must survey the area. If he feels that the area is safe, then he may remove his lock last.
12. The engine may be started up.
13. Resume operations.

18.2.2 Electric Start Engine

1. Conduct a JSA with everyone on location about the job at hand.
2. Go to the engine and shut it down by turning the key to the "OFF" Position.
3. Remove the key from the engine and place it into a Lock Out Group Box.
4. Everyone that will be working on the engine shall add a lock and a tag to the Lock Out Group Box.
5. The Rig Manager must ensure that everyone is clear of the area and attempt to start the motor.
6. If he can crank the starter:
 - Check for any air starter. If one is found refer to section 19.2.1.
 - If there are more electrical components that need to be locked out, refer to 19.0
7. If he cannot start the engine, and he feels that a good lock out has been achieved, then he must add his own lock to the Lock Out Group Box
8. Conduct the work on the equipment.
9. When the job is completed, clean the area. Remove all tools and equipment from the engine area.

10. Inform everyone that the Lock Out Devices are about to be removed.
11. Everyone that added a lock must remove their lock and tags from the Lock Out Group Box.
12. The Rig Manager must survey the area. If he feels that the area is safe, then he may remove his lock last from the Lock Out Group Box
13. The engine may be started up.
14. Resume operations.

18.3 Blocks LO/TO Procedure

15. Conduct a JSA with everyone on location about the job at hand.
16. If possible, the driller must set the blocks on the swivel stops. If he cannot lower the blocks on the stops, then the driller must instruct his boom operator to set the slips and lower the blocks as low as possible.
17. The driller must apply the brakes and chain the brake handle to the floor and disable the clutch.
18. The Rig Manager must then survey the area and ensure that the blocks are shut down in a safe manner.
19. The Rig Manager must add a lock to the chain that is holding the brake hand secure.
20. The Rig Manager must place the key to the lock that was added in a Lock Out Group Box.
21. Everyone that will be working in the derrick or on the blocks shall add a lock and a tag to the Lock Out Group Box.
22. Conduct the work on the equipment.
23. When the job is completed, clean the area. Remove all tools and equipment from the rig floor.
24. Inform everyone that the Lock Out Devices are about to be removed.
25. Everyone that added a lock must remove their lock and tags from the Lock Out Group Box.
26. The Rig Manager must survey the area. If he feels that the area is safe, then he may remove his lock last from the Lock Out Group Box
27. The Rig Manager may remove the lock from the brake handle chain.
28. Resume operations.

19.0 Material Handling

Before handling materials, be alert to the possibility of sharp edges, nails, slivers, sharp wire ends or other projections that might cause cuts or punctures. Wear serviceable gloves and steel toed shoes when handling rough or heavy objects. Be sure and keep hands and fingers away from the point of "pinch" or "bite" between the material being handled and another item, or the bench, floor, ground, structure or other fixed object.

- If an object is too heavy or bulky for you to lift, get someone to help you or use mechanical means.
- When it is necessary for you to lift an object, use the following method:
 - Face the object; place feet fairly close together and close to the object to be lifted.
 - Bend the knees and squat by the object in a comfortable position (don't stoop over it).
 - Get a firm, balanced grip on the object.
 - Keep the back straight and arms as straight as possible.(Do not twist the body).
 - Lift the object by straightening the legs, while keeping the back straight
 - Keep the object as close to the body as possible.
- When it is necessary to move an object from one location to another, use the following procedure.
 - Be sure you can lift and carry it.
 - Be sure you have a clear route to where you are going.
 - Be sure the footing is OK.
 - Be sure you have a clear place to put the object down.
 - Pick the object up as described in No. 9 above.
 - Walk carefully, twisting as little as possible.
 - Set the object down carefully, by reversing the lifting procedure.
- Never carry heavy objects onto or off a truck, unless the truck bed is flush with, and against the dock or loading platform, or a suitable deck plate on ramp is securely in place.
- Don't attempt to step up or down a high step with a heavy or bulky object. Use a ramp or skids instead.
- Use care and caution in the handling of all objects. Many times, harmless in themselves, cause injury if improperly or thoughtlessly handles.

19.1 Handling Drill Pipe and Drill Collars

Drill pipe, collars, or any other tubular shall be placed from the pipe baskets to the pipe racks by means of a forklift only. Walking or working on tubular and/or pipe racks shall not be permitted.

NEVER attempt to pick up any tubular by hand.

When laying tubular on the racks, keeps these safe practices in mind:

- Before adding any pipe or collars to the pipe racks, ensure that the racks are level and straight. You should never have more than two 2" by 4" studs under either ends of the pipe racks.
- Ensure that the pipe racks have adequate pins or other means of stopping pipe before it rolls onto the ground.
- Roll pipe on the racks with your fingers pointing up at all times. Never grab the pipe and roll it. This will cause a major pinch point between the joint you are rolling and the joint it is heading towards.
- Use approved chocks to keep more than one layer from rolling unexpectedly.
- If a joint of pipe is in the wrong position in the boom, one person on the floor shall come to the boom and assist the person rolling the pipe.
- If a drill collar is in the wrong position in the boom:
 1. Roll the collar into the boom.
 2. Close boom clamps
 3. Rotate the clamps upwards.
 4. Tie a winch line to the drill collar.
 5. Open the boom clamps
 6. Pull on the collar to the desired location using the winch.
- If pipe must be removed from the pipe rack to the boom area, follow these steps
 1. Attach the winch line to the farthest end of the boom and raise the boom to approximately half mast.
 2. Wrap the winch line around the center of the pipe.
 3. Come up with the winch.
 4. Once the pipe has cleared the pipe racks, lower the joint to the ground.
 5. Unhook the winch line and resume operations.

19.2 Handling Drums

To loosen or tighten a ring, always use a proper type bung wrench with a long handle.

A wadded rag, piece of waste or similar item should be held tightly over the ring when it is loosened to catch any possible spray from pressure in the drum. If a drum contains acid, caustic or any other injurious chemicals, goggles shall be worn when removing the ring. The use of drum carts, drum tilters and drum racks will greatly increase the safety factor when handling full or partly full drums. Be sure the chime catch is securely engaged before raising or tilting. Suitable gloves should always be worn when handling or moving drums. A drum may be moved a short distance by tilting and rolling it on the bottom chime. Extreme care must be taken, however, in watching both the balance of the drum and other objects which might mash the fingers. When moving a drum from one location to another, always use a winch, hoist or other power equipment if available and practical.

- To lay a full drum on its side, use the following procedure:
 1. Stand facing the drum with one foot against the bottom, legs apart and other foot about one-half step.
 2. Reach to far side of drum and pull it toward you.
 3. When drum is balanced, steady it with both hands and face it with feet spread apart.

4. Lower drum with both hands on the inner side of top chime.
 5. Keep your back straight while lowering drum.
 6. Roll drums by pushing, with hands on top. Change direction by gripping one chime and pulling back, and then proceed to push with both hands on top. Do not kick or roll the drum with the feet.
 7. When necessary to go down a skid or slope, skid the drum endwise or use a snub rope with the drum in a rolling fashion.
 8. To go up a skid or steep slope, if power is not available, use a snub rope with one man pulling and a least two men pushing.
- To set full or partly full drum upright, use the following procedure:
 1. Stand close to end of drum with one foot directly in front and the other a little to the side.
 2. Squat, and keeping back straight, place hands about 8" apart under bottom chime.
 3. Using legs and arms raise drum to balance position.
 4. Guide the drum to a standing position with both hands on the inner side of the chime, on the near side.
 5. Never put fingers on outside edge of chime when setting up or moving a drum in close quarters.

19.3 Handling Bulky Material

1. Use the proper position and action for lifting.
2. When standing fairly erect, rest the sack against one hip and your abdomen. Walk carefully, balancing sack with the other hand.
3. To carry a sack on your shoulder, while in a standing position, boost the sack to one shoulder, place hand on your hip so that sack rests partially on your shoulder and partially on your arm. Balance sack with the other hand.
4. When the sack is to be put down, reverse the lifting procedure. If it must be lowered to the ground, bend your knees, not your back.
5. If building a pile, swing the sack forward to its proper place from either the shoulder or hip, depending on the height of the pile. Do not attempt to heave or toss the sack.
6. Sacked material should always be properly "Cross-tied" if piled more than two sacks high.
7. When handling cement, chemically treated muds or other material that creates excessive flying particles or dust, proper eye protection and dust masks shall be worn.
8. When handling sacked material for prolonged periods employees shall keep as much of the body covered as possible. Exposed parts of the body should be washed frequently to prevent chemical irritations and burns.

19.4 Handling Materials by Power

1. All materials which are too large or too heavy to be safely handled by hand shall be handled by power operated equipment.
2. When power operated equipment is available, it should be used on large or extended jobs of handling small materials. This can usually be done with a savings of time and increased safety.
3. All basic power operated equipment including winches, drums, cables, chains, block, safety hooks, slings, etc., shall be inspected in accordance with applicable regulations and be kept in good operation condition at all times.
4. Ties, slings, bridles, etc., shall be proper size and strength for the load to be lifted and shall be securely fastened to the load.
5. If the operator cannot clearly see every part of the operation to be performed, he shall have a signal man to assist him.
6. When a signal man is used, he shall be in position to see every phase of the operation and be clearly seen by the operator.
7. Any signal which might possibly be required shall be thoroughly understood by the operator and the signal man.
8. Workmen shall never get under a suspended load.
9. If it is necessary to guide a load, guide lines of sufficient length for complete safety or the workmen shall be used.
10. When loading material with a winch line, workmen shall stay far enough away to avoid injury if the line should fail.
11. Chains of not less than "Grade 70" shall be used when binding or lifting is required.

19.5 Pipe Racks

1. Walking or working on tubular and/or pipe racks shall not be permitted.
2. Pipe racks shall be level and straight at all times.

19.6 Rules Worth Repeating

Most of our lifting and material injuries will be eliminated if each employee is careful to:

1. Never lift more than what is comfortable for you.
2. Obtain additional help if necessary.
3. Watch out for the safety of your fellow employee/
4. Keep fingers and toes out of pinch points when handling drums.
5. Make sure that clearances are adequate before moving the object.
6. Avoid entanglement of the object moved with other material in the area.
7. Keep back straight and use legs for lifting power.

20.0 Mobile Lifting

Phoenix Drilling does not own any mobile lift equipment. All Phoenix employees are trained on what they are and not to operate them unless they are trained by a Qualified Mobile Lift Trainer. Operator to provide any training if required.

21.0 Personal Protective Equipment (PPE)

Every employee, Operator Representatives, sub-contractor, and visitor shall wear appropriate Personal Protective equipment when on a Phoenix Drilling Location. It is the Rig Manager's responsibility to ensure that all person's on his rig is wearing the proper PPE appropriate for the tasks at hand. In the absence of the Rig Manager, the driller will take on this responsibility. Everyone must follow the PPE requirement recommended by Material Safety Data Sheets (MSDS). Personal protective equipment is vital to safety in your work location. The equipment should be properly cleaned, inspected after each use, and stored in clearly marked and properly designated areas. Any equipment that no longer provides adequate protection should be repaired or replaced immediately. Unusable equipment should be destroyed.

21.1 Head Protection

Every employee, sub-contractor, and visitors that enter a Phoenix Drilling Location must wear a hardhat. It is each employee's responsibility to maintain and replace the hat's suspension as needed. NEVER alter the hard hat by use of a drill, rivet, or paint. Hardhats must comply with ANSI standard Z89.1 Class E. The hardhat must be worn squarely on the head and never cocked to one side. The hardhat must be facing forward when on the head.

21.2 Eye Protection

Every employee, sub-contractor, and visitors that enter a Phoenix Drilling Location must wear appropriate eye protection at all times. Safety glasses must be equipped with side shields as a minimum unless the hazard requires increased protection. If the person must wear prescription glasses, he must wear "Overshots" over his/her personal prescribed glasses or have shatter proof lenses that meet the ANSI Z87.1 standard. Safety glasses shall never be used for goggles when mixing chemicals or welding.

21.2.1 Eye Protection Table

Use the following table as a guideline when choosing the correct eye protection.

Job Description	Possible Hazard	Eye Protection Required
Acetylene - Burning, cutting, or welding	Sparks, flying particles, hot metal, and harmful rays	Welding Goggles or Welding full Face Hood

Chemical Handling	Splash, Acid Burns, Fumes	Splash-proof Goggles
Grinding	Flying Particles	Full Face Shield and Safety Glasses underneath the Face Shield
Painting	Particles	Goggles

21.2.2 Contact Lenses

Contact lenses shall never be worn as protective devices for your eyes. Do not wear contact where there is potential exposure to gas, water flow, and welding. Keep a spare pair of contacts or prescription glasses at all times.

21.3 Foot Protection

Steel toed footwear meeting ANSI 241.1 shall be worn at all times while working or visiting a Phoenix Drilling Location.

The following footwear is not allowed:

- Open-toed shoes, such as sandals, slippers and flip flops.
- Shoes with smooth crepe soles or smooth leather soles.
- High-heeled footwear where the heel is in excess of 1 inch.

21.4 Hand Protection

Wearing gloves prevents many minor injuries resulting from rough materials or irritating substances. Wear gloves whenever possible.

- Leather or leather palm gloves should be worn when wire rope is being handled.
- Appropriate gloves such as rubber or neoprene, must be worn when acids, caustic soda, and soda are handled.
- Insulated or tear resistant gloves must be worn when regular work gloves cannot adequately protect against burns.

21.5 Hearing Protection

Hearing protection shall be worn in areas where:

- The noise level is above 85dB.
- You must raise your voice to speak to another person.
- There are signs indicating to wear hearing protection.
- There are short bursts of sounds

21.6 Fall Protection

Fall Protection is required when working at an elevation of 6 (six) feet or more above the floor, the ground, or any approved work surface such as platforms and scaffolding.

Persons must wear a full-body, construction style harness with a proper means of attachment.

Other situations that require fall protections regardless of height include, but not limited to:

- Climbing the derrick ladder to any distance greater than six feet. More information can be found in 21.6.1 working in the derrick.
- Working above potential hazards.
- Working in areas with no handrails that include a top rail, and mid rail, and a toe-board.
- Working on top of any structure, including, but not limited to the water tank, doghouse, and generator house.

21.6.1 Working in the Derrick

It is not a policy of Phoenix Drilling to work in derrick during regular drilling operations. Any work such as cleaning or greasing the crown must be done on a rig move day. All work must be done before the derrick is raised. If there is not enough time to do the tasks at hand before you must raise the derrick, consult with the Rig Manager or Drilling Superintendent for more time.

Should an equipment failure arise and an employee must climb in the derrick or to the crown, the following steps must be implemented.

1. Everyone on location must be notified of the task. Including the Company Representative and the Rig Manager. This will be achieved by everyone participating in a Job Safety Analysis.
2. The driller must Lock Out and Tag Out the Brakes on the drilling console. This will ensure that the blocks will not slack off at any time.
3. At this point, an employee may enter the derrick, provided all of the proper PPE is present. He shall have his full body harness tied to the Self-Retracting Lifeline, as well as the derrick climber. This will ensure a 100% Tie Off.
4. The employee must climb the derrick using only the ladder to the crown. Once he reaches the crown, he must tie a 6' lanyard to the Overhead Safety Anchor at the top of the crown. **THEY MUST NEVER REMOVE HIS FULL BODY HARNESS.**
5. While the employee is on top, behind, or inside the derrick, no other operation shall be done. Unless running casing. Including, but not limited to
 - Regular drilling operations
 - Making a connection
 - Raising the boom for any reason
6. Once the work is done, the employee shall climb down the derrick using only the ladder.
7. At this point, the Locks and Tags may be removed.
8. Everyone may proceed with regular operations.

21.6.2 Retracting Lifeline Rescue

Rescue of personnel who are suspended from a retractable lifeline and are *unconscious* must take place before in a time period of no more than 15 minutes.

Once a climber has become unconscious you must activate the Location Emergency Response System Immediately.

Rescue of a stranded climber can be accomplished by utilizing the Hydraulic Winch unit system.

1. Have a rescue climber climb next to the victim.
2. Lower the winch line to the back of the victim.
3. Pass the winch line through the back D-ring of the victim's harness and hook it into itself.
4. Have the winch operator raise the victim slightly and then slowly lower him to the ground/floor.
5. Always have someone to signal the winch operator and to guide the victim to a kneeling position.

Rescue for a conscious climber can be much easier since he can help himself by attaching slings and/or counterbalance swivels to his harness for rescue. The Conscious climber who is suspended by a retractable lifeline or climbing lanyard can possibly add time to the rescue clock by moving his legs and trying to position his body into a position where his legs can be propped to the horizontal as much as possible, thus taking some of the pressure off of the leg straps.

Note:

Recent studies indicate that suspension in a full body harness for as little as 5 minutes can be fatal. Death is caused by cardiac fibrillation induced by venous blood pooling in the legs. Although there are several mechanisms that can precipitate cardiac fibrillation, the two most troublesome are the sudden change in circulatory volume to the heart and the sudden return of deoxygenated, toxic blood to the heart once the victim is rescued. When a suspended person is rescued, stress on the heart can be minimized by having the person slowly move from a kneeling to a sitting position to a supine or lying face-up position over a 30 to 40 minute timeframe (10 minutes at least for each position). Do not allow the victim to standup or lay down immediately after they are rescued. Do not treat the victim for shock. Follow-up with medical evaluation.

NO ONE SHALL BE IN THE DERRICK IF LESS THAN 3 PEOPLE ARE ON LOCATION!

1. One Person Climbing the derrick
2. One Person at the drilling controls
3. One person on standby should the person in the derrick be rescued.

21.6.3 Care and Inspection of Fall protection

Visual inspections of all fall devices must be made before each use of the item. Periodic inspections shall be conducted and documented.

22.0 Respiratory Protection Program

Phoenix Drilling has developed a program to ensure the protections of employees from inhalation of hazardous amounts of airborne contaminants. In IDLH Atmospheres, affected employees will complete a medical evaluation, be fit tested for the type of respirator to be used and to be trained on that respirator.

22.1 Selection of Respirators

Respirators will be selected based on hazards to which the employee is exposed. Material Safety Data Sheets for chemicals and materials will be reviewed to determine the proper protection. All crew must be clean shaving at all-time *See Addendum 6*.

22.2 IDLH Atmospheres

The Phoenix Drilling Management does not require any Phoenix Drilling Employee to work in IDLH Atmospheres. If an IDLH Atmosphere arises, the employees are expected to evacuate using a 5-Minute Escape Pack only.

23.0 Rig Moving

When moving a rig, heavy loads of drilling equipment are transported from one location to the next. Winch trucks and forklifts are used to move the equipment using a Contract Rig Moving Company. Everyone on location has their own responsibility during this high risk procedure.

23.1 Rig Manager

1. Ensure that everyone is aware of the job by conducting a JSA before the rig is "Rigged Down"
2. Drive and mark the route from one location to the other, and check for overhead power lines.
 - If any lines are involved in the route, it is the Rig Manager's responsibility to contact the Operator's Company Representative to get a qualified electrician on the premises to raise the line, in order to clear the load by no less than 10 feet. If the Operator's company man will not call an electrician; the Rig Manager is responsible for calling one himself. If Phoenix Drilling's Rig Manager has to call out an electrician for the Operator, the office will add the cost of the electrician to the Operator's invoice. The Rig Manager will also escort all high loads, and must stop at that point to make sure the above procedure has taken place.
3. Supervise Phoenix employees during the rigging down operation. Supervise the Contract Rig Moving Company by working with the Truck pusher during the move.

4. Only Rig Manager should Lower/Raise the derrick.
5. Escort the rig to the new location
6. Set the rig equipment in the desired location on the job site
7. Line the substructure center with the cellar.
8. Assist employees

23.2 Driller

1. Ensure JSA is conducted for his crew before they start their job.
2. Walk around the rig and remove/install hoses and equipment.
3. Assist the Rig Manager is setting in the unit at the new location.
4. Assist his crew

23.3 Boom Operator

1. Transport the Entry sign and Smoking stands to the new location.
2. Walk around the rig and remove/install hoses and equipment.
3. Assist the driller with any job
4. Set the pipe racks at the new location in the desire location for his rig.

23.4 Contract Rig Moving Company

1. Ensure Permits are in place by DOT before the Rig Move is started.
2. Truck pusher will ensure all his employees conduct a JSA with Phoenix Drilling
3. Transport the rig. The Truck Pusher will follow the Rig Manager to the new location and confirm that the taller structures will not strike a low hanging electrical line.
4. Set equipment in the desired location of the Phoenix Drilling Rig Manager

24.0 Short Service Employees (SSE)

The Phoenix Drilling Short Service Employee Police (SSE) is a tool for supervisors and other crew members to identify employee of Phoenix Drilling that have less than 6 (six) months of experience. This is designed to prevent troubled jobs, equipment damage, and injury to the SSE and other crew members. It is not limited to new hires. If an employee comes from another location, the Rig Manger may make the decision whether or not to put the employee on SSE Status.

24.2 Mentor

Each SSE shall be assigned an experienced mentor to assist the SSE during his/ her employment. It is the mentor's responsibility to supervise the SSE and prevent them from injuring themselves or damaging equipment by not allowing them to perform task that they are not properly trained to do.

24.3 Removal from SSE Status

To be removed from SSE Status, the SSE must show safe behavior for 6 months and have a general awareness and working knowledge of a Phoenix Drilling Rig or location. If the Rig Manager believes that the employee has shown this, he may release the employee from SSE Status. SSE employees that do not qualify to be removed from SSE Status may be subject to a terminated or remain in a SSE Status until released by the Rig Manager.

24.4 Operator's Policy

If the Operator that Phoenix Drilling is contracted to has a stricter policy, adopt the operator's policy at the expense of the operator.

25.0 Stairs and Walkways

- When carrying tools or material, always keep one hand free to use the handrails as you go up and down stairways.
- All steps, walkways, and stairs must be kept free of obstructions and slippery material such as oil and grease.
- When walkways and steps are provided, they must be used. Do not take shortcuts.
- Tools, equipment, and material must not be left on walkways. Standard handrails must be provided for four or more steps.
- The use of colors to mark elevation changes is encouraged.
- Secure hoses and electrical cords to the floor or ground whenever they are laid across walkways.
- Never run a hose or other lines up the stairs. Run the lines between the mid rail and toe-board of the guardrails mounted on the floors.
- During winter, be careful of icy walkways.
- Keep hands free and out of the pockets.

26.0 Substance Abuse Policy

POLICY

It is the policy of the Company that employees will not be involved in the unlawful use, possession, sale or transfer of drugs or narcotics in any manner that may impair their ability to perform assigned duties or otherwise adversely affect the Company's business. Further, employees will not possess alcoholic beverages in the workplace or consume alcoholic beverages in association with the workplace. The specific purpose of this policy and procedure is to outline the methods for maintaining a work environment free from the effects of alcohol and/or drug abuse or other substances that adversely affect the mind or body. If we are to continue to fulfill our responsibility to provide reliable and safe service to our customers and a safe work environment to our employees, employees must be physically and mentally fit to perform their duties safely and efficiently. The

Company will comply with all applicable federal, state and local alcohol and drug related laws and regulations

II. APPLICABILITY

This policy applies to all employees of the U.S. organizational components of the Company and to applicants for positions within the Company, including all outside contractors.

III. DEFINITION

A. For the purpose of this policy, the following definitions will apply:

- 1. "Chemical Substances"** - all illegal drugs, controlled substances, and Other mind or nerve altering substances that are ingested, injected, inhaled or introduced into the body system in any other way.
- 2. "Illegal Drugs"** - all drugs which are not legally obtainable; for example, marijuana, hashish, heroin, cocaine, PCP, LSD, designer drugs, and others.
- 3. "Controlled Substances"** - narcotics, the legal use of which requires a doctor's prescription, such as Demerol, Codeine, and others; depressants or barbiturates; tranquilizers such as Valium, Librium, and others; and stimulants or amphetamines.
- 4. "Under the Influence"** — the presence of a chemical substance in the body fluids above the cut-off level established by the Company and/or customer's policy, or other commonly accepted cut-off levels and/or the presence of a chemical substance that affects the individual in a detectable manner.
- 5. "Impairment Causing Medication"** — Any substance which causes or may cause mood or mind altering effects, or which alters judgment and/or reaction time.

IV. PROCEDURE

A. Employment Applicants

1. The Company will maintain pre-employment screening practices designed to identify individuals who use illegal drugs or individuals whose use of chemical or controlled substances or alcohol indicate a potential for impaired or unsafe job performance.
2. Such substance abuse tests will be "broad based" i.e., the type of tests that

encompass a wide variety of commonly used drugs.

3. All applicants for employment will be required to sign a consent form giving their permission to be tested for substance abuse at some point during the pre-employment screening process. If the applicant refuses to sign the consent form, employment consideration will be discontinued.

4. All applicants for employment who are made offers of employment are required to take and pass a substance abuse test as a condition of employment.

5. Applicants who fail the pre-employment drug screening test may request a confirmation test be run on the same biological specimen at the expense of the applicant.

6. Applicants who are disqualified from employment consideration because of the results of their substance abuse test are encouraged to discuss their results with the testing facilities Medical Review Officer (MRO) if more discussion is requested or initiated by the applicant. All information will be held in the strictest of confidence that the law allows.

7. The applicant who fails the drug test may be considered for employment and re-testing after a (3) month period for first offence. In the event an employee fails a drug test for the second time, that employee will no longer be eligible for rehire.

B. Employees

1. The following conduct will be grounds for corrective action, up to and including discharge as well as the notification of local law enforcement by the Company, if appropriate:

a. The unlawful manufacture, dispensation, possession, or use of a controlled substance on Company premises at any time is prohibited.

b. The possession, distribution, sale or use of illegal drugs or alcohol while on Company premises at any time.

c. The possession, use or sale of legal controlled substances by any employee, other than the employee for which the controlled substance was prescribed by a licensed physician, while on Company premises at any time, or while on Company business.

d. The distribution or sale of a legal controlled substance by any employee for which the controlled substance was prescribed by a licensed physician, while on Company premises at any time, or while on Company business.

e. Reporting to work while under the influence of illegal drugs, chemical or controlled substances, including those not medically authorized by a licensed physician.

f. Attempting to or actually switching or adulterating any body fluids testing sample.

g. Refusal to be tested at the request by a representative of the Company and/or customer of the Company.

2. Employees will be required to undergo a drug and/or alcohol test under the following conditions:

- a. Reasonable cause or suspicion;
- b. Customer required random testing;
- c. Customer required pre-access testing;
- d. Post-accident and/or injury testing;
- e. Returning from a personal leave of absence;
- f. Unannounced workplace searches;
- g. DOT required testing.

3. **Reasonable Cause or Suspicion.** Managers and supervisors may request

that an employee submit to a drug and/or alcohol test when a manager or supervisor has a reasonable cause or suspicion that an employee is intoxicated or under the influence of drugs or alcohol. "Reasonable cause or suspicion" is a belief based on objective facts sufficient to lead a reasonable prudent supervisor to suspect that an employee is under the influence of drugs and alcohol so that the employee's ability to perform the functions of the job is impaired or so that the employee's ability to perform his/her job safely is reduced.

All managers and/or supervisors who make determinations of reasonable cause or suspicion on DOT covered employees must first complete Reasonable Suspicion training as mandated by the DOT.

Once "reasonable cause" is ascertained, a Company representative should immediately transport the employee to the local designated drug-testing facility. Refusal to be tested will subject an employee to immediate discharge.

There are various factors that may provide some support for reasonable cause testing. A few examples include but are not limited to:

- a. Slurred speech;
- b. Alcohol on breath;
- c. Inability to walk a straight line;

- d. An accident involving Company property or vehicles;
- e. An accident resulting in injury to the employee or other employees, or to any other person, which requires medical attention;
- f. Verbal altercation;
- g. Behavior which is so unusual that it warrants summoning a supervisor or anyone else with authority;
- h. Possession of alcohol or drugs;
- i. Information obtained from a reliable person with knowledge;
- j. Any incident that affects the employee's behavior or work performance and gives reasonable cause or suspicion to believe the employee is affected by the use of drugs or alcohol.

4. Customer Required Random Testing. Random testing will be required of those employees when required by a customer's program or contract.

5. Customer Required Pre-Access Testing. When required by a customer of the Company, a pre-access drug and/or alcohol test will be required of all employees assigned to a specific job.

6. Post-Accident and/or Injury Testing. Any employee involved in any occupational accident, incident or injury which requires off-site medical treatment will be required to submit to substance and/or alcohol abuse testing.

7. Unannounced Workplace Searches. When probable cause exists, the Company reserves the right to conduct unannounced searches for unauthorized substances anywhere on Company property including, but not limited to, lockers, desks, file cabinets, and employee's personal vehicles parked on Company parking lots. Personal property on Company premises will be subject to such searches. All searches must be authorized by the direction of the servicing Human Resources representative or his/her designee.

8. Department of Transportation (DOT) Required Testing. Certain Drivers with a Commercial Driver's License (CDL) and offshore service personnel that fall under customer mandated DOT regulations are required to submit to specific tests under the DOT Drug and Alcohol Testing Regulations. The DOT Drug and Alcohol Testing Regulations are applicable to these employees, in addition to, and not in lieu of, this Substance Abuse Policy.

C. Corrective Action

1. If the result of the substance abuse test is positive, a confirmation test will be run on the same biological specimen. Any confirmation test results that are contrary to the original test will be tested again on the same biological

specimen for final determination.

2. If the final determination of the substance abuse test is positive, the employee will be subject to corrective action, up to and including discharge. Any employee discharged for violation of this policy may be considered for re-testing and re-employment after a 3 month period.
3. The Company will have the sole option to permit the employee to participate successfully in a Company-approved rehabilitation program as a condition of continuing employment.
4. Employees who test positive for substance abuse, and are not subsequently discharged by the Company, will be subjected to random, unannounced testing for a period of twelve (12) months. A second positive test will result in immediate discharge. DOT covered employees may also be subject to additional DOT protocols if they are not immediately discharged from the Company.
5. It is the Company's intent to maintain a climate that encourages employees with a drug or alcohol dependency problem to voluntarily seek assistance and participate successfully in a Company approved rehabilitation program. Employees who voluntarily enter into such a program would not be subject to the random testing requirements described in section III.C.4. of this policy provided that the Company has not previously identified a substance abuse policy violation.

Employees who wish to seek confidential and personal help with Substance Abuse problems are encouraged to contact an Employee Assistance Plan (EAP) counselor (refer to the Benefits Summary and Enrollment brochure, workplace postings or contact Human Resources for phone number to EAP) and/or the National Drug Abuse Hotline (1-800 662-4357) for immediate referral and assistance.

6. Upon successful completion of the voluntary rehabilitation program, the employee will be reinstated to active duty if management has determined that the employee is capable of satisfactory job performance. In making this determination, management may require the employee to take and pass a Chemical Substance Screening prior to reinstatement. Benefits may be available for Company-approved courses of treatment for drug and alcohol dependency in accordance with the provisions of the health care and disability benefit plans.

D. Employees are required as a condition of employment to abide by this drug-free policy and to notify the Company within five (5) days if they have been convicted of any criminal drug offense in order to comply with the Drug Free Workplace Act of 1988. In

addition, employees are required to notify the Company within five (5) days if they have been convicted of a criminal alcohol offense occurring while on the job, on Company premises, or in a Company vehicle. Any employee found to have violated this policy or to have been convicted of the above described criminal drug or alcohol offense is subject to corrective action up to and including discharge or, under appropriate circumstances, successful participation in a Company approved rehabilitation program at the sole option of the Company. Failure to notify the Company as provided above will be grounds for corrective action, up to and including discharge.

E. Any employee taking any impairment-causing medication which has been prescribed by his or her treating physician, or non-prescription medication legally sold over-the-counter, must immediately inform his or her supervisor if the medications could reasonably interfere with the performance of his or her job duties. On request, and for cause, the prescription will be verified in writing by the issuing physician. The Company may also require that the employee obtain a written verification from his or her treating physician stating that he or she can perform the required job duties. Any medical information submitted to the Company must be held strictly confidential and only be given to, and used by, appropriate decision makers on a need to know basis. All original medical documentation will be forwarded to the business unit's Human Resources representative to be maintained in the employee's separate medical files. Failure by employee to report use of impairment-causing medication, if the medications could reasonably interfere with the performance of his or her job is grounds for immediate disciplinary action, up to and including termination of employment.

F. Minimum threshold levels for specific substances in body fluids analysis will follow guidelines set by the Department of Transportation (DOT). A customer may have minimum threshold levels below the Department of Transportation (DOT); in this case, the customer's threshold levels will prevail.

V. CONTRACT AND TEMPORARY (AGENCY) EMPLOYEES

Policy provisions regarding the use, possession or sale of drugs and alcohol are equally applicable to contract and temporary personnel. Violations of these provisions or refusal to cooperate with provisions of this policy can result in the Company's barring contract and temporary personnel from Company facilities or participating in Company operation.

. NOTIFICATION

All employees will be made aware of the Company's Substance Abuse Policy. The policy will be permanently posted on Company bulletin boards and discussed and distributed during all new employee orientations. The Company reserves the right to revise, modify, change in whole or in part, this Substance Abuse Policy. Employees will be notified in writing within a reasonable time of such revisions, modifications or changes.

VII. RESPONSIBILITY

Subsidiary senior management and the servicing Human Resources representatives are jointly responsible for the administration, implementation and integrity of the Substance Abuse program. The Vice President, Human Resources must be consulted on all matters that deviate from this policy.

27.0 Tools & Equipment

1. Tools should be kept in an orderly fashion on the tool bench or in the tool chest so that they may be found when needed. All tools should be cleaned after use.
2. All tools and equipment should be inspected regularly. Defective and unsafe tools or equipment must be reported promptly to the rig manager, and repaired or replaced at once.
3. Hand or power tools should be used only in the manner and for the work for which they are designated.
4. Tools must not be left lying on moving machinery or on elevations.
5. When operating driving tools, use a tool holder for the chisel, bar, or other tools being struck.
6. When several people are using hammers, shovels, picks axes, machetes, brush hooks, or similar equipment, they should maintain a safe distance from each other.
7. Faces of sledge hammers and mauls should be slightly tempered. Heads of cutters and other anvil tools should not be tempered.
8. Cutting tools are safer and more effective when kept sharp. Avoid using dull cutting tools.
9. Crowbars, chain tongs, piston rods, etc. must be placed in their proper racks.
10. Nails or sharp edges around the tops of containers should be eliminated immediately.
11. Boards should not be thrown or left around with nail points protruding. The nails should be removed or bent down.
12. It has been concluded that no significant increase in fire safety will result from the use of "non-sparking" hand tools in lieu of ordinary tools made of steel.

27.1 Abrasive Wheel Grinders

1. Safety washes must be used on all abrasive wheels. Abrasive wheels must have a protective shield and a toll rest that is adjustable to maintain a clearance no greater than one eighth of an inch. The operator must wear cup type goggles and should wear a face shield and stand to one side of the plane of rotation whenever possible.
2. Never plug in a wheel grinder to a power source without ascertaining that the grinder switch is in the "off" position.
3. The spindle speed of the machine must not exceed the maximum operation speed marked on the wheel.
4. Before a wheel is mounted, it should be closely inspected to make sure it has not been damaged. This inspection should include the "Ring Test"; tap lightly with a nonmetallic instrument. If the wheel sounds dead or does not ring, it is cracked or defective and must not be used.

27.2 Boom

Only Phoenix Drilling employees may operate the boom. The following are guidelines for a boom on a Phoenix Drilling Rig:

- The boom must be visually inspected daily by the boom operator. He must inspect for cracks, dull dies, missing pins or keepers, and worn or defective cylinders.
- No one shall stand under the boom while the boom is raised.
- Before lowering the boom, the boom operator must ensure that no one is under the boom.
- No one shall stand within 15' of the furthest point of the boom, excluding the person rolling pipe during any operation.

27.3 Crown-A-Matic

The crown-o-matic is a device that assists the driller from "Crowning out" or creating a collision between the crown and the blocks.

Before tripping for pipe or running casing, ensure that the crown-a-matic is placed over the drilling line that is installed on the drawworks. Never attempt to trip pipe or run casing without the crown-a-matic. A crown-a-matic test must be done at the beginning of each tour.

27.4 Derricks

All derricks should be visually inspected periodically. If any section or part of the structure is damaged or if concealed damage is detected, report it immediately to the Rig Manager and mark the area with red paint.

27.5 Iron Rough Neck

1. Never have your hands touching the iron rough neck unless you have taken all the energy away from it.
2. Never place your hands inside the iron rough neck.
3. Inspect hoses for leaks and defects.
4. Inspect cylinders for excessive leaking.
5. Items shall never be used to make the heads of the iron rough neck "bite" properly. In this case, shut down the operation and correct the problem.

27.6 Ladders

1. Ladders must be maintained in good condition. When portable ladders are used on hard surface, they must be equipped with no slip footing, or securely fastened to prevent slipping. The top of the ladder should be secured, or the ladder should be held by another person. The base of the ladder should be placed away from the wall by a distance of about one fourth of the walking length of the ladder.
2. All permanent ladders must be securely fastened at both top and bottom. Long ladders should be secured at intermediate points.
3. Ladders should be closely inspected when purchased or installed and re-inspected at least twice a year. Remove any oil, grease, or slippery material from the ladder and your shoes.
4. Wooden and fiberglass ladders must not be painted.

5. Ladders must not be placed in front of doors that open towards the ladder, unless the door is locked or guarded.
6. When climbing or descending a ladder, a person should face the ladder and hold the side rails, not the rungs. Climbers should not carry tools or other encumbrance in their hands. A tool belt or pouch should be used for holding small tools, and a hand line should be used to raise or lower heavy or bulky objects. When a climbing belt is supplied, it must be used by the person ascending or descending the ladder.
7. When working from a ladder, never extend farther than your arm's length to reach work.
8. No more than one person should be on the ladder at the same time, where possible.
9. Never work on an unsecured ladder in windy conditions.
10. A person should not stand on the top two steps or the spreader of a step ladder.
11. A step ladder should not be used as a straight ladder.
12. It is a good safety practice for someone to hold or steady a step ladder for a person working near its top.
13. When performing electrical work that requires the use of a ladder, use a wooden or approved fiberglass ladder. Metal ladders must not be used.
14. When raising a ladder, make sure it will not contact an electrical line.
15. Extension ladders should properly overlap between sections.
16. Ladders must not be used as scaffold members or for any purpose for which they are not intended.
17. Unsecured portable ladders should not be left standing unattended.

27.6.1 Derrick Ladders

Before entering the derrick ladder, the following must apply:

1. A minimum of 3 Phoenix Drilling Employees must be on location.
2. The person entering the ladder must be wearing a construction style harness.
3. He must have the climbing assistant tied to the front d-rings on the harness.
4. He must have the self-retracting life line attached to the d-ring in the back of the harness.
5. He must have a double hook lanyard for 100% tie off.
6. When climbing up or down the ladder always use three point contact.

27.7 Power Tools

1. Before repairing, servicing, or changing components on any power tool, the power source must be disconnected. If the tool is driven by a gasoline engine, the ignition wire should be disconnected from the spark plug, or other precautions must be taken to prevent the accidental firing of the engine.
2. When there is a danger of explosion or a fire, air operated tools must be used. Electrical tools must not be used on tanks, lines, or stills, until the tanks lines and surrounding area are free of combustible gas. Combustible gas must not be used to operate air operated tools. Persons using air operated tools must be sure that the source of air supply cannot exceed the working pressure of the tool.
3. The frames of portable electric tools and equipment except Underwriters Laboratory (UL) approved double insulated tools, must be grounded either through a third wire, in the cable containing the circuit conductors through a separate wire grounded at the

source of the current. Outlets supplying power to portable electric tools that are either outside or in wet locations must have approved ground fault circuit protection or other means of grounding the circuit.

4. Hand held power tools must be equipped with a switch that is manually held in the on position (dead man switch). All drill presses must be equipped with a dead man switch.
5. Electric power tools and equipment showing worn, deteriorated or inadequate insulation must be removed from service until repaired.

27.8 Screwdrivers

Never attempt to use a screwdriver as a pry tool, drift, or chisel. Screwdrivers should be held in such a way that if they slip, they will not stab you or anyone else.

27.9 Sledge Hammers

Sledge work should be so arranged that sledging in a horizontal arc is not necessary. All observers should stand clear. Check the clearance overhead and behind before starting to work. Lay sledges flat when they are not in use.

27.10 Tongs

1. Tong Counterbalance shall be properly maintained at all times for vertical movement of the tongs.
2. The Snub line shall be inspected periodically for any worn or defectiveness.
3. When tubular require high torque to make up or break out, the driller must ensure that his crew is positions themselves in a clear area. He must also ensure that they are out of the strike zone of the tongs should they release.
4. Latches shall always be clean and lubricated.
5. Dies shall be clean and sharp with keepers installed.
6. Items shall never be used to make the tongs "bite" properly. In this case, shut down the operation and correct the problem.
7. Wear a full face shield when changing out the dies.
8. Never leave tongs latched when moving the drill string up or down.
9. When the tongs are not in use, they must be hanging over and attached to the handrails with a chain.

27.11 Wrenches

1. Wrenches should not be used directly over the head. Instead, work at an angle.
2. The wrench must fit the nut.
3. Never use a wrench to secure leverage.
4. Adjustable pipe wrenches and crescent type wrenches should be adjusted to take a full but snug grip on a pipe or nut.
5. Never step or jump on wrenches or tongs when additional force is needed.
6. Extensions, or "cheaters", should not be used on wrench handles.
7. When connections are known to release suddenly, a hammer wrench should be used.

28.0 Training

28.1 OSHA Compliance Training

The following training is conducted for each and every employee of Phoenix Drilling. The Phoenix Drilling OSHA Compliance Training is conducted by the Phoenix Health, Environmental and Safety department or third party companies. All subjects come from the Occupational Safety and Health Standards for the General Industry 1910.

Subpart H Hazardous Materials

The types of hazardous substances on a Phoenix Rig; how to recognize hazardous substances; your role in Phoenix's Emergency response plan; what can happen in an emergency due to a hazardous substance.

Subpart H 1910.119-120 Emergency Response

How and who to report incidents to, explains the Phoenix Drilling Chain of Command; and how to call emergency teams. This subject reminds the employees to be aware of what county they are working in and what the directions to their rig are in case of an emergency.

Subpart I Personal Protection Equipment (PPE)

What, when & how to wear PPE, the limitations of PPE and the proper care and storage of PPE. Included in this subject is Fall Protection (1910.21-30), Hearing protection, respiratory protection (1910.134) and how to inspect your tools and work area (1910.241 244).

Subpart J 1910.146 Permit Required Confined Spaces

What are the characteristics of a Permit-required confined space, the "Entry Permit Program", preparing the space, safe working atmospheres and emergency and rescue situation.

Subpart J 1910.147 The Control of Hazardous Energy (Lockout/Tag out)

What Lockout/Tag out is, when to perform Lockout/Tag out, OSHA's six steps for controlling sources of Hazardous energy and OSHA's 3 steps for restoring the energy once your work is done.

Subpart K Medic First Aid/CPR (yearly)

Maintain or gain the core knowledge, skills and confidence necessary to provide effective emergency care until professional emergency medical care is available or arrives.

Subpart L Fire Protection

How fires start and are classified; fire prevention and proper fire extinguisher use.

Subpart N 1910.181&184 Derricks and Slings

How to use and inspect derricks, winch lines and rigging gear.

Subpart S Electrical

Basic principles of electricity, safe work procedures and correct response to emergencies.

Subpart Z Hazard Communication 1910.1200

Signs to pay attention to on a Phoenix Rig, why we have the HazCom Program, various physical and health hazards and how to use warning labels and MSDSs properly.

Hydrogen Sulfide Training (yearly)

Properties of H₂S, emergency response, how to protect yourself with the right respirator and proper H₂S PPE. A fit test is conducted during this class.

283 Basic Well Control Training – Rig Managers

This class covers the following:

1. Basic Concepts of Well Control
2. Kicks and their Causes and Warning Signs
3. Shut in Procedures and Pressures
4. Well Bore Volume Calculations
5. Well Control Planning and Supervision
6. Well Killing Process and Analysis
7. B.O.P Equipment
8. Well Control Problems
9. Fracture Gradients
10. Underground Blowouts
11. Abnormal Pressure Detection
12. Small Tubing Operations
13. Drill Stem Testing

29.0 Trenching and Shoring

All Phoenix Drilling employees are trained on what a trench is. No Phoenix employee is qualified to construct a trench or do any shoring on a Phoenix Location. All trenching and shoring will be conducted using a Third Part Company.

30.0 Welding/Hot Work

All Phoenix Drilling welding shall be conducted by a Contract welder or Welding Company.

30.1 Welder's Responsibilities

All welders that come onto the Phoenix Drilling location must comply with the following.

1. Must have shaded lenses rated for welding jobs.
2. Must have steel toed work boots/shoes complying with ANSI 241.1.
3. Welding leads shall have no exposed wires.
4. Stingers must be insulated.
5. Acetylene bottle must have back pressure valve. They must also be standing and never lay down.
6. Extension cords shall have no exposed wires.

30.2 Welding Job Requirements Pre Spud

The following must be in place before any welding may be done on a Phoenix Drilling Rig.

1. A JSA must be completed for the job before it starts.
2. One person must stand close to the welder but no more than 15 feet away as a fire watch. He must be equipped with at least one 201bs. ABC fire extinguisher.

30.3 Welding Job Requirements Post Spud

1. No welding may be conducted within 30 feet of the well unless the well is shut in.
2. A JSA must be completed for the job before it starts.

3. A Hot Work Permit must be completed before and during the job to monitor the air and any potential hazards.
4. One person must stand close to the welder but no more than 15 feet away as a fire watch. He must be equipped with at least one 201bs. ABC fire extinguisher.

31.0 Workplace Principles

31.1 Conduct

Phoenix Drilling has the up most respect for every person that comes to work or visit any Phoenix Drilling location. Phoenix Drilling expects every employee and contract employee to conduct themselves in a professional manner. Horseplay, practical joking, any pornography, and harassment are strictly prohibited.

31.2 Drugs & Alcohol

Refer to the 26.0 Substance Abuse Policies

31.3 Equipment Operators

Only Phoenix Drilling employees are authorized to operate any Phoenix Drilling equipment at any time. No one may operate any equipment without the approval from Phoenix Drilling Management.

31.4 Explosives and Fire Arms

Phoenix Drilling prohibits the use, possession, transportation, or sale of any explosives, unauthorized flammable materials, firearms, or other weapons while on Phoenix Drilling premises, engaged in company business, or operating Phoenix Drilling equipment.

31.5 Housekeeping

Keep all tools, walking and working surfaces, guardrails, ppe and fire extinguishers clean and free of obstructions at all times.

- Store tools appropriately to prevent trip hazards.
- Only use approved solvents for cleaning. Gasoline is not permitted to use as a cleaning solvent.
- Place oily and greasy rags in another place than regular trash.
- Keep all containers and storage areas marked and labeled.

31.6 Hygiene

- Facial Hair is permitted as long it inside the respirator seal area. Refer to *Addendum 6*.
- Long hair shall be kept brushed and arranged so that it will not be tangled in equipment.
- Bathing at the end of the day on a regular basis will eliminate the body odor and is asked of all Phoenix Drilling employees.

31.7 Jewelry

Jewelry such as rings, earrings, tongue rings, or any other piercing shall be prohibited to wear on a Phoenix Drilling Rig during your working hours.

31.8 Language Requirements

Every Phoenix Drilling employee must be able to read and understand all posted signs and labels on a Phoenix Drilling Rig. If there is concern for safety due to a language barrier, a person may not be allowed on a Phoenix Drilling location until an assigned interpreter be provided.

31.9 Personal Electronic Devices

Personal cell phones, ear buds, pagers, and computers are not allowed on the drilling floor due to any ignition source they may have. Phoenix Drilling is not responsible for any loss or damage to anyone's personal electronic device.

31.10 Smoking

Smoking shall only be permitted in designated smoking areas. These include:

- Next to the Safe Smoking Area Sign
- Next to the Entry Sign
- A minimum of 40' of any Phoenix Drilling equipment.

Never leave any cigarette butts on any location. Place them in a bucket or trash barrel. Smoking on or around the rig unless you are in the designated smoking area will have disciplinary action and up to immediate termination.

31.11 Stopping

When you observe an unsafe act, provide a Questioning attitude. Allow the person to teach you what he/she is doing.

- **If the employee(s) are in IMMEDIATE DANGER, STOP the job or unsafe acts as soon as you see them happen. DO NOT WAIT FOR THE JOB TO STOP!!**
- You have observed for 5-10 minutes. Stop the employee and provide the safe acts that you observed. This allows the employee the chance to see that you are not look for the negative things in his job all the time.

32.0 Incident Investigation

<u>Scope</u>	<u>682.1</u>
<u>Introduction</u>	<u>682.2</u>
<u>1. Incident Type and Investigation.....</u>	<u>32.3</u>
<u>2. Full Incident Investigation</u>	<u>32.4</u>
<u>Appendix 1 Investigation Summary</u>	<u>32.5</u>
<u>Appendix 2 Incident Investigation Report</u>	<u>32.6</u>

32.1 Scope

The purpose of this guidance is to provide further practical advice and guidance on how to investigate incidents (accident and near misses).

32.2 Introduction

The investigation and analysis of work-related incidents forms an essential part of managing health and safety.

‘Blaming individuals is ultimately fruitless and sustains the myth that accidents and cases of ill health are unavoidable when the opposite is true. Learning the lessons from what your investigation uncovers is at the heart of preventing incidents. Identify what is wrong and take positive steps to put it right’.

32.3. Incident Type and Investigation

Catastrophic	Major	Moderate	Minor	Insignificant	Near Miss
<p>The most serious types of incidents resulting in: Serious injury, permanent incapacity, loss of limb, fatality, severe damage to property, environment, long-term loss of services.</p>	<p>The most serious types of incidents resulting in: Major injury, multiple injuries, long term ill health, damage to property, short-term loss of services, significant effect on property or environment.</p>	<p>Any incident which results in: Fractures, sprain, strain, laceration, ill health, moderate damage to property, environment, interruption to services.</p>	<p>Any incident which results in: Cut, bruise, basic first aid treatment required minor impact to services, property or environment.</p>	<p>Any incident which results in: Minimal injury (no first aid needed), no repairs required, minimal impact to services, property or environment.</p>	<p>Any incident which results in: No harm or damage to property or environment but had the potential to cause harm or damage.</p>
<p>Full investigation required- Investigation will be required by Phoenix management Team</p>	<p>Full investigation will be required by Phoenix management Team</p>	<p>Full investigation will be required by Phoenix management</p>	<p>Rig Manager to complete initial investigation to learn lessons and prevent reoccurrence.</p>	<p>Rig Manager to complete initial investigation to learn lessons and prevent reoccurrence.</p>	<p>Rig Manager to complete initial investigation to learn lessons and prevent reoccurrence.</p>

32.4 Full Incident Investigation

Full investigations should be completed for moderate, major and catastrophic incidents and serious near misses. The aim of the investigation is to identify **what happened** and **why**.

It is expected that the manager of the injured person completes the investigation process. Managers may delegate investigation actions e.g. examining site of the incident, taking photographs and witness statements to other members of staff but should be involved in formulating or agreeing the action plan and approving the investigation report.

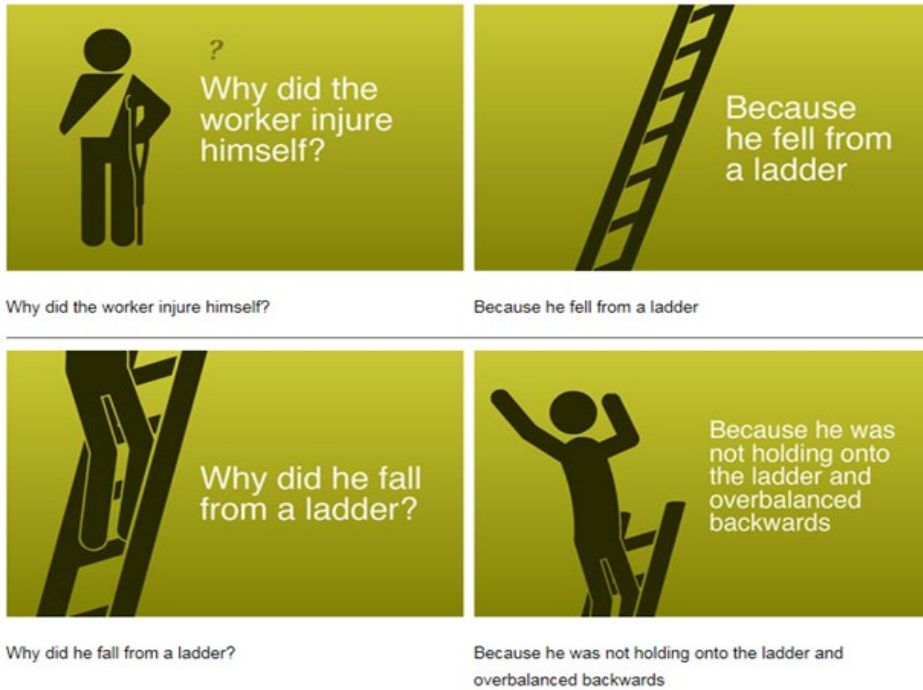
The incident investigation report has been designed to be easy to complete by staff who are not trained investigators. The form consists of a series of questions which prompt who should be spoken to and what information to gather, the form can be hand written or typed up. The finished form should be emailed to Phoenix Management.

The incident investigation should identify the root cause an initiating event or failing from which all other causes or failings arise. The simplest way to identify the root cause is the “Five Why’s” approach.

By asking ‘Why?’ up to five times, you can:

- Investigate the causes of an accident or incident;
- Identify solutions to prevent an incident happening again;
- Make links between the root causes of good or bad practice; and
- Learn good practice lessons to improve health and safety.

Example Five Why Approach:





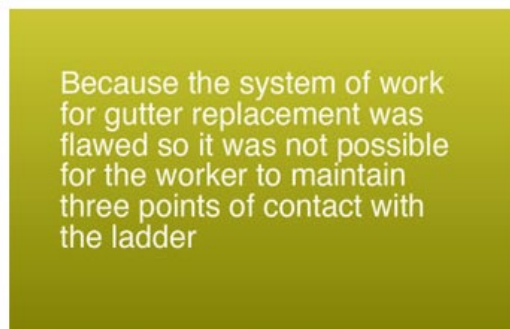
Why was he not holding onto the ladder?



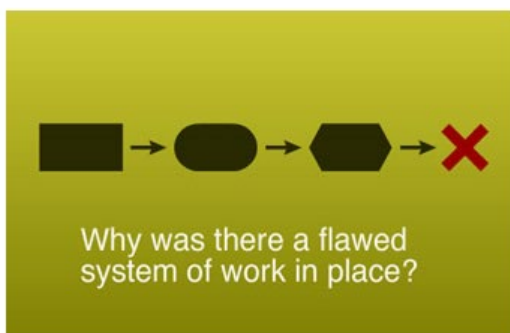
Because he was using both hands to remove a large section of guttering



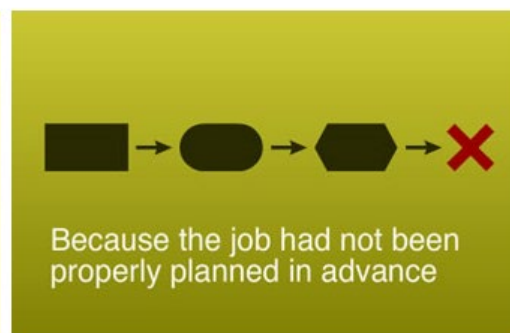
Why was he using both hands to remove guttering?



Because the system of work for gutter replacement was flawed so it was not possible for the worker to maintain three points of contact with the ladder



Why was there a flawed system of work in place?



Because the job had not been properly planned in advance

When using the “Five Why’s” analysis, try to:

- Ask proper questions that delve deeper into the issue. Simply repeating the word ‘Why?’ is not likely to help.
- Avoid being or appearing confrontational.
- Avoid making questions personal or accusatory (e.g. ask ‘Why do you think the ladder slipped?’ not ‘Why did you make the ladder slip?’)

The last page of the incident investigation report is an action plan. If any remedial actions are necessary, they should be captured in the action plan table. The manager accountable for the service area is responsible for coordinating the completion of all actions within agreed timescales and report back to Phoenix management.

32.5 Appendix 1 Investigation Summary

Direct Observations

Information from your own direct observation of the site of the accident.

Take photographs to aid observations.

- Layout of premises
- Equipment e.g. make/model/type/status/guards/power status
- Presence (or absence) of articles or substances
- General conditions and housekeeping
- Other person(s) & activities present
- Reconstruction of incident
- Position of injured person/witnesses at time of the accident
- Assess what you find
- Check reliability, accuracy
- Identify and resolve differences
- Identify gaps in evidence

Do you have a clear picture of what happened and why?

People to speak to

Information from:

- Injured person
- Direct witnesses
- First aider
- Other employees working in or managing the accident site

Documents

Information from relevant documents:

- Accident report form
- First aider report
- Risk assessments
- Manual handling assessments
- Employee training records
- Monitoring records
- Maintenance
- Previous accident reports
- Health & Safety or management guidance
- Safety meeting documents, JSA's, Pre-tours
- Witness Statements

32.6 Appendix 2 Incident Investigation Report

<p>Incident Investigation Form</p> <p>This form should be signed by the person leading the incident investigation. If you require any assistance in completing this form please contact Phoenix Management Team</p>
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Section 1: Overview

Name of Injured Person(s)		Date of Incident	
Manager carrying out investigation		Date of Investigation	
Incident Severity	Catastrophic		<input type="checkbox"/>
	Major		<input type="checkbox"/>
	Moderate		<input type="checkbox"/>
	Minor		<input type="checkbox"/>
	Insignificant		<input type="checkbox"/>
	Near miss		<input type="checkbox"/>

Section 2: Investigation Information Gathering

<p>1. Where and when did the incident happen? Include building and room. For outside areas consider aerial map with site of incident marked.</p>		
<p>2. Who was injured/ suffered ill health or was otherwise involved with the incident? Include name and position of injured employee.</p>		
<p>3. Were there any witnesses to this incident?</p>		
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; text-align: center;">Yes <input type="checkbox"/></td> <td style="width: 50%; border: none; text-align: center;">No <input type="checkbox"/></td> </tr> </table>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Yes <input type="checkbox"/>	No <input type="checkbox"/>	
<p>3.1 Have witness statements been taken?</p>		
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; text-align: center;">Yes <input type="checkbox"/></td> <td style="width: 50%; border: none; text-align: center;">No <input type="checkbox"/></td> </tr> </table>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Yes <input type="checkbox"/>	No <input type="checkbox"/>	
<p>Supporting documents included in this investigation:</p> <p><input type="checkbox"/> witness statements - Name(s)</p> <p><input type="checkbox"/> Other (Please state)</p>		

Supporting documents included in this investigation:

witness statements - Name(s)

Other (Please state)

1. How did the incident happen? (Be as detailed as possible)

2. Why did the incident happen? (Use the Five Why's technique to identify root causes)

3. Was there a JSA for the task?

Yes

No

3.1 Did the JSA cover all aspects of the task?

Yes

No

3.2 Was it being followed?

Yes

No

4. Was there anything unusual or different about the working conditions at the time of the incident? e.g. weather, open day etc.

Yes

No

Give details:

1. What injuries or ill health effects, if any, were caused?

2. Was maintenance, cleaning or housekeeping sufficient?

Yes

No

2.1 If not, explain why not:

12.2 Was PPE used during the task?	
3. Was a lack of competency/training a factor in this incident?	
Yes <input type="checkbox"/>	No <input type="checkbox"/>
3.1 Give details:	
4. Was safety equipment and/or personal protective equipment provided?	
Yes <input type="checkbox"/>	No <input type="checkbox"/>
12.1 Was the equipment suitable for the task and being used correctly?	
Yes <input type="checkbox"/>	No <input type="checkbox"/>

Give details if no is selected:	
<input type="checkbox"/>	<input type="checkbox"/>
4. Are you aware of any similar incidents?	
Yes <input type="checkbox"/>	No <input type="checkbox"/>
Give details:	
5. Is there any other information not detailed above that is relevant to this incident?	
Yes <input type="checkbox"/>	No <input type="checkbox"/>
Give details:	

