

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

AUG 15 2014

5. Lease Serial No.

SF-078005

6. If Indian, Allottee or Tribe Name

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well

☐ Oil Well

☒ Gas Well

☐ Other

7. If Unit of CA/Agreement, Name and/or No.

HUERFANO UNIT

8. Well Name and No.

HUERFANO UNIT 273

2. Name of Operator

Burlington Resources Oil & Gas Company LP

9. API Well No.

30-045-21650

3a. Address

PO Box 4289, Farmington, NM 87499

3b. Phone No. (include area code)

(505) 326-9700

10. Field and Pool or Exploratory Area

Basin DK

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface UNIT L (NENE), 1840 FSL & 900' FWL, Sec. 33, T26N, R10W

11. Country or Parish, State

San Juan, New Mexico

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ Acidize

☐ Alter Casing

☐ Casing Repair

☐ Change Plans

☐ Convert to Injection

☐ Deepen

☐ Fracture Treat

☐ New Construction

☐ Plug and Abandon

☐ Plug Back

☐ Production (Start/Resume)

☐ Reclamation

☐ Recomplete

☐ Temporarily Abandon

☐ Water Disposal

☐ Water Shut-Off

☐ Well Integrity

☒ Other Tubing Repair

H2S Plan

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof.

If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once Testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

RCVD AUG 29 '14

Burlington Resources intends to do a tubing repair workover on subject well per the attached procedure.

H2S is known to exist on this location and the H2S Contingency Plan is attached.

OIL CONS. DIV.

DIST. 3



H₂S POTENTIAL EXIST

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

DENISE JOURNEY

Title STAFF REGULATORY TECHNICIAN

Signature

Denise Journey

Date

8/14/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Troy Salvors

Title Petroleum Eng.

Date 8/26/2014

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office FFO

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instruction on page 2)

NWOCDFV

12 PC

ConocoPhillips
HUERFANO UNIT 273
Expense - Repair Tubing

Lat 36° 26' 32.064" N

Long 107° 54' 25.92" W

PROCEDURE

Note: Well measured 10 ppm of H₂S once in June of 2013, monitor levels. If treatment is needed, contact Wells Engineer. H₂S contingency plan is available in DSM.

Before RU, run slickline to pull downhole equipment. If obstruction cannot be pulled, set a locking 3-slip stop above fish.

1. Hold pre-job safety meeting. Comply with all NMOCD, BLM, and COPC safety and environmental regulations. Test rig anchors prior to moving in rig.

2. MIRU work over rig. Check casing, tubing, and bradenhead pressures and record them in Wellview. If there is pressure on the BH, contact Wells Engineer.

3. Remove existing piping on casing valve. RU blow lines from casing valves and begin blowing down casing pressure. Kill well with 2% KCl as necessary. Ensure well is dead or on vacuum.

4. ND wellhead and NU BOPE. Pressure and function test BOP to 250 psi low and 1000 psi over SICP high to a maximum of 2000 psi held and charted for 10 minutes as per COP Well Control Manual. PU and remove tubing hanger and tag for fill, adding additional joints as needed. Record pressure test and fill depth in Wellview.

5. RU Tuboscope Unit to inspect tubing. TOOH with tubing (per pertinent data sheet). LD and replace any bad joints and record findings in Wellview. Make note of corrosion, scale, or paraffin and save a sample to give to the engineer for further analysis.

6. If fill is tagged, PU 3-7/8" string mill and bit and CO to PBTD @ 6649' using the air package. TOOH. LD mill and bit. If fill could not be CO to PBTD, call Wells Engineer to inform how much fill was left and confirm/adjust landing depth.

7. TIH with tubing using Tubing Drift Procedure (detail below).

		Tubing and BHA Description	
Tubing Wt/Grade:	4.70#, J-55	1	2-3/8" Expendable Check
Tubing Drift ID:	1.901"	1	2-3/8" (1.78" ID) F-Nipple
		1	2-3/8" Tubing Joint
Land Tubing At:	6574'	1	2-3/8" Pup Joint (2' or 4')
KB:	12'	~207	2-3/8" Tubing Joints
		As Needed	2-3/8" Pup Joints
		1	2-3/8" Tubing Joint

8. Ensure barriers are holding. ND BOPE, NU Wellhead. Pressure test tubing slowly with an air package as follows: pump 3 bbls pad, drop steel ball, pressure tubing up to 500 psi, and bypass air. Monitor pressure for 15 mins., then complete the operation by pumping off the expendable check. Note in Wellview the pressure in which the check pumped off. Purge air as necessary. Notify the MSO that the well is ready to be turned over to Production Operations. RDMO.

ConocoPhillips Tubing Repair Rig H₂S Contingency Plan

Huerfano Unit #273

1840' FSL & 900' FWL, Spot L, Section 33 -T 026N - R 010W
Lat 36° 26' 32.064" N Long 107° 54' 25.92" W

Prepared by	Leanna Martinez
Area Engineer	Leanna Martinez
Rig Supervisor	Demesio Gomez
COPC Rig Superintendent	Kelly Kolb
COPC Expense Rig Manager	Mark Chambers

Introduction

ConocoPhillips is planning a TOOH with tubing, replace any bad joints, clean out fill as necessary, and return

Data from the BLM indicates that hydrogen sulfide (H_2S) may be present in the gas formation. Hydrogen sulfide (H_2S) is a flammable and highly toxic gas, which in relatively small concentrations, can have adverse effects on people and equipment (refer to the section - Effects of H_2S).

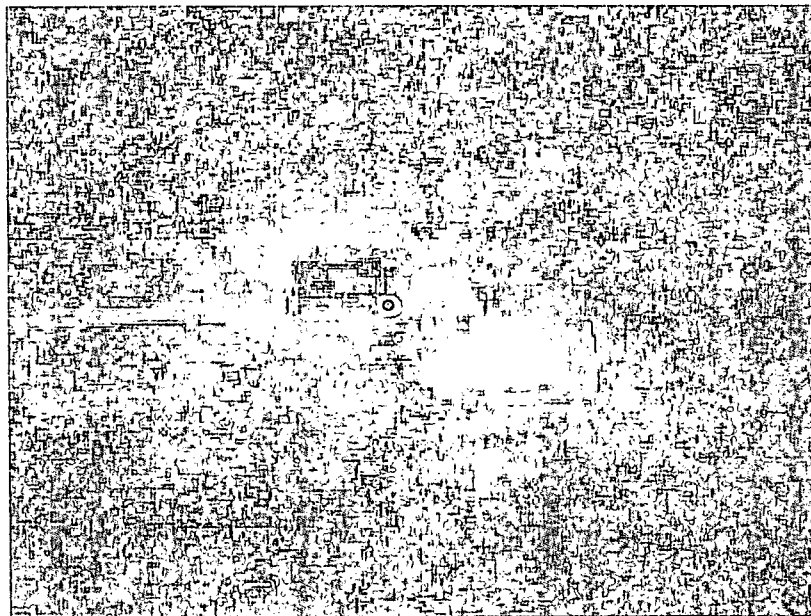
Precautionary measures concerning H_2S in this plan have been formulated based on the following assumptions:

ConocoPhillips is expecting the possibility of H_2S from this location, although gas samples previously analyzed or taken from this well location indicate a concentration of less than 100ppm, levels of >100 ppm can be expected from this particular well based on BLM recommendation for this well site. This contingency plan will be provided should H_2S levels arise during workover operations.

Based on Radius of Exposure (ROE) equations provided in the Department of Interior, Bureau of Land Management, Part II, 43 CFR Part 3160, Onshore Order No. 6, Hydrogen Sulfide Operations, the 100 ppm H_2S ROE for a hypothetical well is 0.7 feet and the 500 ppm H_2S ROE is 0.3 feet. These ROE are based upon 10 ppm H_2S gas at a rate of 0 MMSCFD which includes a safety margin.

No residences, schools, business or parks where the public could reasonably be expected to frequent fall within either the 100 ppm ROE or the 500 ppm ROE. The well is on Fee Land and the only roads in the ROE are dirt well servicing roads. The Huerfano Unit #273 is located Call rig for directions.

This plan has been designated as a guide for well requirements and special considerations to provide for safe and efficient servicing operations in the presence of hydrogen sulfide.



500 ppm ROE
100 ppm ROE

Red Circle
Blue Circle

0.3'
0.7'

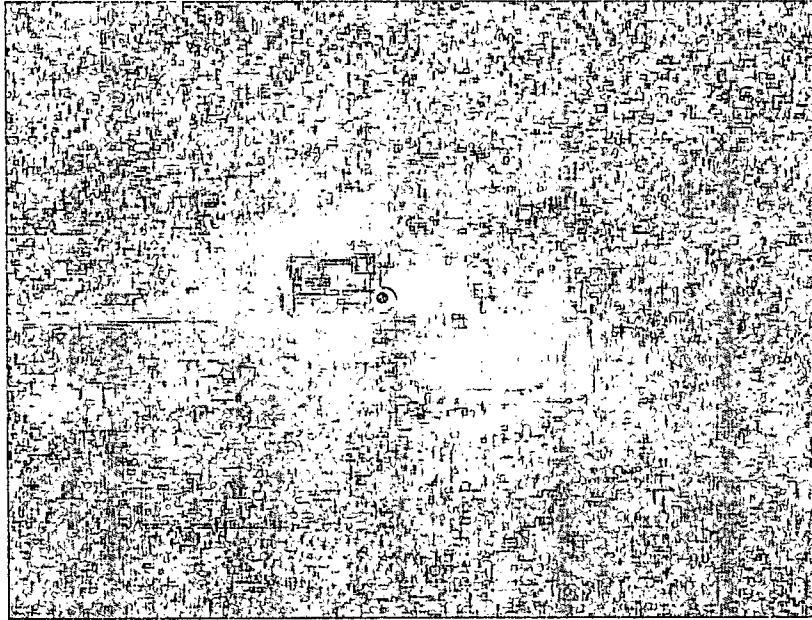
Contact Information

ALL AREA CODES ON THIS PAGE ARE 505 UNLESS OTHERWISE INDICATED

Expense Rig Department			
<u>Name</u>	<u>Office</u>	<u>Home</u>	<u>Cell</u>
Expense Rig Manager Mark Chambers	326-9570	432-2447	215-2354
Expense Rig Superintendents Kelly Kolb Stanley Terwilliger	326-9582 599-4066	327-2177 793-4993	320-4785 320-5921
Leanna Martinez	324-6110		215-2678
Production Engineering Steve Jones Ryan Frost	326-9715 324-5143	325-4177	947-9292 320-0953
Health, Safety & Environmental Department			
<u>Name</u>	<u>Office</u>	<u>Home</u>	<u>Cell</u>
HSE Manager Sharon Zubrod	326-9793	436-2288	330-5395
HSE Representatives Shannon Donnelly Bryan Salazar	324-6181 599-3413	(907)-394-0520	215-82985 320-7365
Contract Safety Steve Martinez (DMX Safety Alliance) Ginger Lockeby (Advanced Safety)	325-7233 324-0575		320-0544 320-6250
Well Control Resources			
<u>Name</u>	<u>Office</u>		
Cudd Well Control Co.	(713)-849-2769	24 hr Contact	

List of Public Areas

No residences, schools, business, parks or other areas where the public could reasonably be expected to frequent were found to be within the 100 ppm ROE or 500ppm ROE. Included is an aerial map indicating the physical location of the Radius of Exposure. All land within the 100 ppm radius of exposure from the wellhead is contained to the wellhead.



500 ppm ROE
100 ppm ROE

Red Circle
Blue Circle

0.3'
0.7'

CONDITION II - MODERATE DANGER TO LIFE
(such as circulating out a potentially toxic gas kick)
IN ADDITION TO CONDITION I REQUIREMENTS

Display only the ORANGE CONDITION II warning sign and flag.

Direct corrective action to control flow of gas.

Set up roadblocks and restrict personnel movements to a minimum.

CONDITION III - EXTREME DANGER TO LIFE
(when it appears that well control will be lost)
IN ADDITION TO CONDITION I and II REQUIREMENTS

Display only the RED CONDITION III warning sign and flag.

Contact and request local police to evacuate people and to control traffic within the danger zone. Should the condition be immediately dangerous to the public, take necessary life saving action until local police arrive.

Ignite the well if necessary. (See the following section - Igniting the Well.)

Contract Rig Supervisor (Toolpusher)

A Toolpusher will be on-site at all times when a contingency plan is in place.

In the absence or incapacitation of the Rig Supervisor, the Toolpusher will assume all responsibilities designated herein to the Rig Supervisor.

Assist the Rig Supervisor and Safety Representative in training crews for handling emergency situations.

Will be trained for all well control or emergency situations as contained herein and how to properly use all safety equipment.

HSE Department

Shall provide safety and environmental information and guidance when required.

Shall review and approve any changes in safety or environmental procedures.

Shall assist as appropriate with operating and maintenance procedures for the safety equipment called for in this plan.

Shall assist with arranging initial training on safety procedures and equipment. Shall provide assistance as needed for follow up training.

Rig Contractor

Shall have personnel properly trained in First Aid/CPR and H2S Awareness.

Shall keep personnel trained in use of safety equipment and safety procedures.

Igniting the Well

Responsibility

The decision to ignite the well is the responsibility of the ConocoPhillips Rig Superintendent. However, the decision should be made only as a last resort and in a situation where it is clear that:

Human life or property is endangered.

There is no hope of controlling the blowout under the prevailing conditions at the well.

In all cases, an attempt should be made to notify the Rig Superintendent of the plans to ignite the well, if time permits. However, the Rig Superintendent and Rig Supervisor must not delay a decision if human life is threatened.

If the well is ignited, the burning H₂S will be converted to sulfur dioxide (SO₂), which is also highly toxic. Do not assume that the area is safe after the well is ignited. Follow through with all plans to evacuate endangered persons.

Means of Ignition

In preparation for igniting the well, keep unnecessary persons in the "Safe Briefing Area". A two person team is required for the actual ignition. Both team members will wear self-contained breathing units and will have 200 feet retrieval ropes attached to safety harnesses. One team member is responsible for checking the atmosphere for explosive gasses with the quad gas monitor. The other member is responsible for igniting the well. Persons remaining in the "Safe Briefing Area" will closely watch the ignition team; and should either man be overcome, they will immediately pull him to safety by the retrieval ropes and apply revival measures.

The primary method for igniting the well will be with a 25 mm meteorotype flare gun. (The location of the flare gun (if available) will be discussed during and noted in the JSA.) These guns have a range of approximately 500 feet. If this method fails or well conditions are such that a safer or better method is apparent, then an alternate method should be used.

Always ignite the well from upwind and do not approach the well any closer than warranted.

Select a location to fire the flare gun that provides maximum protection to the ignition team (behind equipment) while keeping in visible sight by personnel in the "Safe Briefing Area".

Choose a location that has good accessibility and from which retreat can easily be made.

Before firing the flare gun or igniting flammable material, check the atmosphere at your location for combustible gasses with explosimeter.

Special Safety Training

The minimum training for personnel working in affected areas shall include the following elements:

Hazards, characteristics and symptoms of hydrogen sulfide (H₂S), sulfur dioxide (SO₂), carbon monoxide (CO), methane gas, and other hazardous substances as may be appropriate. Effects of these substances are discussed in a section that follows.

Effect on metal components of the system.

Safety precautions to include possible sources at the site.

Operation of safety equipment and life support means and systems.

Corrective action and shutdown procedures.

Detection and measurements of H₂S, CO and combustible gas.

THE RIG SUPERVISOR ON LOCATION SHALL BE RESPONSIBLE FOR THE OVERALL ON-SITE OPERATION, INCLUDING THE SAFETY AND TRAINING PROGRAM.

All personnel, contracted or employed on an unscheduled basis, shall be trained as a minimum in the severity of H₂S and other toxic gasses, safety precautions, evacuation procedures, and as appropriate, the use of respiratory protection equipment. This training shall be completed prior to entering the H₂S location. Visitors shall also be instructed regarding these matters.

To promote efficient safety procedures, an on-site toxic gas safety program, which includes a drill and training session, shall be established for all crews. Records of attendance shall be maintained on the workover rig.

Equipment and Material Specifications

Wellhead and blowout equipment is to conform as per Operations Plan.

BOP equipment will be tested to pressure rating prior to starting any work, with all testing witnessed and recorded by the Rig Supervisor.

The BOP will be operationally tested on every trip. BOP drills will be held prior to operation with the potential to release H₂S, these will be recorded on the Rig Supervisor's report.

Downhole equipment planned for this well will be listed in the Operations' Plan. Ensure that any equipment has been designed in accordance with ConocoPhillips' requirements for sour service.

Effects of H₂S and Other Gases on Workover Operations

Hydrogen Sulfide - H₂S

Hydrogen sulfide is a colorless, flammable, extremely poisonous gas. It is 1.2 times as heavy as air and will accumulate in low areas. It forms an explosive mixture with air between 4.3 and 46.0 percent by volume. It can be detected by smell at a concentration in air of only 0.02 ppm. Exposure to 10 ppm can be tolerated up to 8 hours without respiratory equipment. Respiratory equipment is required to protect workers should conditions exceed the foregoing allowable exposure limit. Concentrations in excess of 20 ppm have an effect on the olfactory nerve which deadens the sense of smell. Unconsciousness can occur without warning within seconds of inhalation at concentrations above 500 ppm.

Concentration Percentage %	Parts Per Million ppm	Physical Effect
0.001	10	Obvious and unpleasant odor. Current ACGIH TLV allowed for 8 hour exposure.
0.01	100	Kills smell in 3 to 15 minutes, may sting eyes & throat.
0.02	200	Kills smell shortly, stings eyes & throat.
0.05	500	Dizziness, breathing ceases in a few minutes. Needs prompt artificial respiration.
0.07	700	Unconscious quickly; death will result if not rescued promptly.
0.1	1000	Unconscious at once; followed by death within minutes.

Sulfur Dioxide - SO₂

Sulfur dioxide is a colorless, nonflammable, intensely irritating gas and 2.2 times heavier than air. It is a by-product of combustion of hydrogen sulfide and is highly toxic. Exposure to 2 ppm can be tolerated for a maximum of 8 hrs. Respiratory equipment will be available and should be used by personnel measuring SO₂ concentration downwind from a flare.

Methane - CH₄

Methane is the major component of natural gas and is colorless, odorless and extremely flammable. The chief danger from methane is explosion. Mixture of CO₂, H₂S and CH₄ will burn if the total H₂S and CH₄ content, in any ratio, is above 25 percent. Also the presence of methane causes an oxygen deficient environment and requires adequate ventilation for breathing.

Carbon Monoxide - CO

Carbon monoxide is a colorless, odorless toxic gas. Its toxicity results from preferential reaction with the hemoglobin in the blood; however, it has no unique toxic action on any of the bodily tissues. CO displaces oxygen from hemoglobin and reduces the oxygen carrying capability of the blood.

The primary danger from CO is that it binds with hemoglobin within the blood, thereby preventing

H₂S EFFECTS

Effects of H₂S in Fluids

When H₂S is entrained in a fluid, it will disassociate to some degree depending on the pH of the system.

Undissociated hydrogen sulfide is the molecule that attacks steel surfaces and causes corrosion and embrittlement. At a low pH, nearly all of the H₂S in a system is in this molecular state. With increasing pH, H₂S dissociation increases so that above pH 10, effectively all of the H₂S is dissociated into bisulfide and sulfide ions. These ions are relatively harmless in the mud as long as the high pH is maintained. If pH is lowered, the reaction will be reversed and hydrogen sulfide gas will be evolved.

In addition to sulfide ions, dissociation of H₂S in drilling mud produces hydrogen ions, which will react with hydroxyl ions in a high pH mud to form water. With sufficient H₂S contamination, excess lime, if any, can be depleted and pH will begin to drop. A sufficient decrease in pH will, as previously stated, evolve H₂S gas.

It is therefore desirable to know whether H₂S has been encountered at the least possible time. This can be accomplished by testing the mud or other working fluids for sulfide ions daily, as described in the sulfide testing procedures that follow (API RP 13B).

Corrosion Effects of H₂S on Steel

The three forms of hydrogen sulfide corrosion of steel are as follows:

- general or weight loss
- localized or pitting
- sulfide stress cracking

In both general and localized corrosion, hydrogen sulfide reacts with the steel to produce iron sulfide. General corrosion is characterized by the formation of an iron sulfide film on the surface of the steel. After long periods of exposure, weight loss can lead to a significant reduction in strength. Localized corrosion is much more serious and predominantly occurs in the pH range below six. Chloride or similar ions must be present for pitting to occur. Iron chloride accumulates at the metal to iron sulfide film interface and promotes a localized attack. Pitting corrosion has not presented a significant problem in drilling operations.

Of foremost concern is sulfide stress cracking or hydrogen embrittlement where failure may take place without warning or significant metal loss. This problem is related to strength of the steel, hydrogen sulfide concentration, pH, exposure time, and temperature and stress level of the steel. Hydrogen sulfide absorbed on the metal surface promotes the entry of atomic hydrogen into the metal. The atomic hydrogen that enters the steel matrix diffuses to positions of high stress where it can induce hydrogen embrittlement. Thus, brittle failure can occur at stress levels significantly less than normal yield stress. A high total dissolved sulfide concentration can be tolerated if the pH is high enough (9.5 or greater).

Definitions

CH4	Methane is the major component of natural gas and is colorless, odorless and extremely flammable. The chief danger from methane is explosion. Mixture of CO2, H2S and CH4 will burn if the total H2S and CH4 content, in any ratio, is above 25 percent. Also the presence of methane causes an oxygen deficient environment and requires adequate ventilation for breathing.
CO	Carbon monoxide is a colorless, odorless toxic gas. Its toxicity results from preferential reaction with the hemoglobin in the blood; however, it has no unique toxic action on any of the bodily tissues. CO displaces oxygen from hemoglobin and reduces the oxygen carrying capability of the blood. The primary danger from CO is that it binds with hemoglobin within the blood, thereby preventing oxygen / blood transfer. Respiratory equipment should be considered for atmospheres containing greater than 25 ppm. Exposure to 25 ppm is allowed up to 8 hours; however, at higher levels it will tend to cause headaches, dizziness and nausea. Concentrations above 1200 ppm are considered immediately dangerous to life and health. In addition to the toxic effects of CO, carbon monoxide burns readily in air. The flammability limits of CO in air change with pressure. At atmospheric pressure, however, the lower limit is +12.5% and upper limit is +74%.
CO2	Carbon dioxide is colorless, non-flammable and at low concentrations odorless. At concentrations higher than atmospheric the gas can have a acidic odor and at concentrations much higher than atmospheric the gas will act as an asphyxiant.
H2S	Hydrogen sulfide is a colorless, flammable, extremely poisonous gas. It is 1.2 times as heavy as air and will accumulate in low areas. It forms an explosive mixture with air between 4.3 and 46.0 percent by volume. It can be detected by smell at a concentration in air of only 0.02 ppm. Exposure to 10 ppm can be tolerated up to 8 hours without respiratory equipment. Respiratory equipment is required to protect workers should conditions exceed the foregoing allowable exposure limit. Concentrations in excess of 20 ppm have an effect on the olfactory nerve which deadens the sense of smell. Unconsciousness can occur without warning within seconds of inhalation at concentrations above 500 ppm.
JSA	Job Safety Analysis
PPM	Parts per Million
Rig Supervisor	Individual (COP employee or contract employee) who supervises workover operations including all rig operations, commonly referred to as the "Company Man"
Rig Superintendent	ConocoPhillips employee who supervises the rig supervisor
SO2	Sulfur dioxide is a colorless, nonflammable, intensely irritating gas and 2.2 times heavier than air. It is a by-product of combustion of hydrogen sulfide and is highly toxic. Exposure to 2 ppm can be tolerated for a maximum of 8 hrs. Respiratory equipment will be available and should be used by personnel measuring SO2 concentration downwind
Toolpusher	Supervisor employed by the rig contractor (well servicing company) to supervise the rig crew