HYDROGEN SULFIDE CONTINGENCY PLAN

**Pronghorn Operating, LLC**

Harley Wells

Section 5-T14S-R44W, 6th PM

Cheyenne County, Colorado

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**SCOPE**

THIS CONTINGENCY PLAN ESTABLISHES GUIDELINES FOR THE PUBLIC AND ALL COMPANY EMPLOYEES WHO’S WORK ACTIVITIES MAY INVOLVE EXPOSURE to HYDROGEN SULFIDE (H2S)GAS.

**OBJECTIVE**

**1.** PREVENT ANY AND ALL ACCIDENTS, AND PREVENT THE

UNCONTROLLED RELEASE OF HYDROGEN SULFIDE INTO THE

ATMOSPHERE.

**2.** PROVIDE PROPER EVACUATION PROCEDURES TO COPE WITH

EMERGENCIES.

**3.** PROVIDE IMMEDIATE AND ADEQUATE MEDICAL ATTENTION

SHOULD AN INJURY OCCUR.

**DISCUSSION**

IMPLEMENTATION: THIS PLAN WITH ALL DETAILS IS TO BE

FULLY IMPLEMENTED BEFORE DRILLING

TO PRODUCTION CASING POINT.

EMERGENCY RESPONSE THIS SECTION OUTLINES THE CONDITIONS

PROCEDURE: AND DENOTES STEPS TO BE TAKEN IN THE

EVENT OF AN EMERGENCY.

EMERGENCY EQUIPMENT THIS SECTION OUTLINES THE SAFETY AND

PROCEDURE: EMERGENCY EQUIPMENT THAT WILL BE

REQUIRED FOR THE DRILLING OF THIS WELL.

TRAINING PROVISIONS: THIS SECTION OUTLINES THE TRAINING

PROVISIONS THAT MUST BE ADHERED TO

PRIOR TO DRILLING TO PRODUCTION

CASING ­POINT.

BRIEFING: THIS SECTION DEALS WITH THE BRIEFING OF

ALL PEOPLE INVOLVED IN THE DRILLING

OPERATION.

CHECK LISTS: STATUS CHECK LISTS AND PROCEDURAL

CHECK LISTS HAVE BEEN INCLUDED TO

INSURE ADHERENCE TO THE PLAN.

GENERAL INFORMATION: A GENERAL INFORMATION SECTION HAS

BEEN INCLUDED TO SUPPLY SUPPORT

INFORMATION.

**EMERGENCY PROCEDURES**

A. IN THE EVENT OF ANY EVIDENCE OF H2S LEVEL ABOVE 10 PPM,

TAKE THE FOLLOWING STEPS:

1. SECURE BREATHING EQUIPMENT.

2. ORDER NON-ESSENTIAL PERSONNEL OUT OF DANGER

ZONE.

3. TAKE STEPS TO DETERMINE IF THE H2S LEVEL CAN

BE CORRECTED OR SUPPRESSED AND, IF SO, PROCEED

IN NORMAL OPERATION.

B. IF UNCONTROLLABLE CONDITIONS OCCUR:

1. TAKE STEPS TO PROTECT AND/OR REMOVE ANY PUBLIC IN

THE DOWNWIND AREA FROM THE RIG - PARTIAL

EVACUATION AND ISOLATION. NOTIFY NECESSARY

PUBLIC SAFETY PERSONNEL

2. REMOVE ALL PERSONNEL TO SAFE BREATHING AREA.

3. PROCEED WITH BEST PLAN (AT THE TIME) TO REGAIN

CONTROL OF THE WELL. MAINTAIN TIGHT SECURITY AND

SAFETY PROCEDURES.

C. RESPONSIBILITY:

1. DESIGNATED PERSONNEL.

1. SHALL BE RESPONSIBLE FOR THE TOTAL IMPLEMENTATION OF THIS PLAN.

b. SHALL BE IN COMPLETE COMMAND DURING ANY

EMERGENCY.

c. SHALL DESIGNATE A BACK-UP.

**EMERGENCY PROCEDURES (CONT.)**

\*(Procedures are the same for both Drilling and Tripping)

ALL PERSONNEL: 1. ON ALARM, DON ESCAPE UNIT AND REPORT

IN UP WIND BRIEFING AREA.

2. CHECK STATUS OF PERSONNEL (BUDDY

SYSTEM).

3. SECURE BREATHING EQUIPMENT.

4. AWAIT ORDERS FROM SUPERVISOR.

TOOL PUSHER: 1. REPORT TO UP WIND BRIEFING AREA.

2. DON BREATHING EQUIPMENT AND RETURN

TO POINT OF RELEASE WITH DRILLER.

(BUDDY SYSTEM).

3. DETERMINE H2S CONCENTRATION.

4. ASSESS SITUATION AND TAKE CONTROL

MEASURES.

DRILLER: 1. DON ESCAPE UNIT.

2. CHECK MONITOR FOR POINT OF RELEASE.

3. REPORT TO BRIEFING AREA.

4. CHECK STATUS OF PERSONNEL (IN AN

ATTEMPT TO RESCUE, USE THE BUDDY

SYSTEM).

5. ASSIGNS LEAST ESSENTIAL PERSON TO

NOTIFY DRILLING FOREMAN AND TOOL

PUSHER BY QUICKEST MEANS IN CASE OF

THEIR ABSENCE.

6. ASSUMES THE RESPONSIBLITIES OF THE

DRILLING FORMAN AND TOOL PUSHER

UNTIL THEY ARRIVE SHOULD THEY BE

ABSENT.

**EMERGENCY PROCEDURES (CONT.)**

DERRICK MAN 1. WILL REMAIN IN BRIEFING AREA UNTIL

FLOOR MAN #1 INSTRUCTED BY SUPERVISOR.

FLOOR MAN #2

MUD ENGINEER: 1. REPORT TO BRIEFING AREA.

(If on location)

2. WHEN INSTRUCTED, BEGIN CHECK OF MUD FOR PH AND H2S LEVEL. (GARETT GAS TRAIN.)

SAFETY PERSONNEL: 1. MASK UP AND CHECK STATUS OF ALL

PERSONNEL

**TAKING A KICK**

WHEN TAKING A KICK DURING AN H2S EMERGENCY, ALL PERSONNEL

WILL FOLLOW STANDARD BOP PROCEDURES AFTER REPORTING TO

BRIEFING AREA AND MASKING UP.

**OPEN-HOLE LOGGING**

ALL UNNECESSARY PERSONEL OFF FLOOR. DRILLING FOREMAN AND

SAFETY PERSONNEL SHOULD MONITOR CONDITION, ADVISE STATUS AND

DETERMINE NEED FOR USE OF AID EQUIPMENT.

**RUNNING CASING OR PLUGGING**

FOLLOWING THE SAME “TRIPPING” PROCEDURE AS ABOVE. DRILLING

FOREMAN AND SAFETY PERSONNEL SHOULD DETERMINE IF ALL

PERSONNEL HAVE ACCESS TO PROTECTIVE EQUIPMENT.

**IGNITION PROCEDURES**

THE DECISION TO IGNITE THE WELL IS THE RESPONSIBILITY OF COMPANY

FOREMAN. IN THE EVENT HE IS INCAPACITATED, IT BECOMES THE

RESPONSIBILITY OF THE CONTRACT RIG TOOL PUSHER. THE DECISION

SHOULD BE MADE ONLY AS A LAST RESORT AND IN A SITUATION WHERE

IT IS CLEAR THAT:

1. HUMAN LIFE AND PROPERTY ARE ENDANGERED.

2. THERE IS NO HOPE CONTROLLING THE BLOWOUT UNDER THE

PREVAILING CONDITIONS AT THE WELL.

NOTIFY THE DISTRICT OFFICE IF TIME PERMITS, BUT DO NOT DELAY IF

HUMAN LIFE IS IN DANGER.

INITIATE FIRST PHASE OF EVACUATION PLAN.

INSTRUCTIONS FOR IGNITING THE WELL

1. TWO PEOPLE ARE REQUIRED FOR THE ACTUAL IGNITING

OPERATION. THEY MUST WEAR SELF-CONTAINED BREATHING

UNITS AND HAVE SAFETY ROPE ATTACHED. ONE MAN (TOOL

PUSHER OR SAFETY ENGINEER) WILL CHECK THE ATMOSPHERE

FOR EXPLOSIVE GASES WITH THE EXPLOSIMETER. THE OTHER

MAN (DRILLING FOREMAN) IS RESPONSIBLE FOR IGNITING THE

WELL

2. IGNITE UP WIND AND DO NOT APPROACH ANY CLOSER THAN IS

WARRANTED.

3. SELECT THE IGNITION SITE BEST FOR PROTECTION, AND WHICH

OFFERS AN EASY ESCAPE ROUTE.

4. BEFORE FIRING,CHECK FOR PRESENCE OF COMBUSTABLE GAS.

5. AFTER LIGHTING, CONTINUE EMERGENCY ACTION AND

PROCEDURE AS BEFORE.

6. ALL UNASSIGNED PERSONNEL WILL LIMIT THEIR ACTIONS TO

THOSE DIRECTED BY THE DRILLING FOREMAN.

**REMEMBER:** AFTER WELL IS IGNITED, BURNINGHYDROGEN SULFIDE

WILL CONVERT TO SULFUR DIOXIDE, WHICH IS ALSO HIGHLY

TOXIC. DO NOT ASSUME THE AREA IS SAFE AFTER THE WELL

IS IGNITED.

**TRAINING REQUIREMENTS**

WHEN WORKING IN AN AREA WHERE HYDROGEN SULFIDE GAS (H2S)

MIGHT BE ENCOUNTERED, DEFINITE TRAINING REQUIREMENTS MUST

BE CARRIED OUT.

1. HAZARDS AND CHARATERISTICS OF H2S.

2. PHYSICAL EFFECTS OF HYDROGEN SULFIDE ON THE HUMAN BODY.

3. TOXICITY OF HYDROGEN SULFIDE AND SULFUR DIOXIDE.

4. H2S DETECTION.

5. EMERGENCY RESCUE.

6. RESUSCITATORS.

7. FIRST AID AND ARTIFICIAL RESPIRATION.

8. EFFECTS OF H2S ON METALS.

9. LOCATION SAFETY.

**SERVICE COMPANY AND VISITING PERSONNEL**

A. EACH SERVICE COMPANY THAT WILL BE ON THIS WELL

WILL BE NOTIFIED IF THE ZONE CONTAINS H2S.

B. EACH SERVICE COMPANY MUST PROVIDE FOR THE

TRAINING AND EQUIPMENT OF THEIR EMPLOYEES BEFORE

THEY ARRIVE AT THE WELL SITE.

C. EACH SERVICE COMPANY WILL BE EXPECTED TO ATTEND

A WELL SITE BRIEFING.

**EMERGENCY EQUIPMENT REQUIREMENTS**

1. SIGNS

A. ONESIGN LOCATED AT LOCATION ENTRANCE WITHTHE

FOLLOWING LANGUAGE:

**CAUTION – POTENTIAL POISON GAS**

**HYDROGEN SULFIDE**

**NO ADMITTANCE WITHOUT AUTHORIZATION**

2. WIND SOCK OR FLAG– WIND STREAMERS

A. ONE 36” (IN LENGTH) WIND SOCK (OR FLAG) LOCATED AT PROTECTION

CENTER, AT HEIGHT VISIBLE FROM RIG FLOOR.

B. ONE 36” (IN LENGTH) WIND SOCK (OR FLAG) LOCATED AT HEIGHT

VISIBLE FROM PIT AREAS.

3. HYDROGEN SULFIDE DETECTOR AND ALARMS

A. H2S MONITOR WITH ALARM WILL BE LOCATED ON THE RIG

FLOOR. THIS MONITOR WILL BE SET TO ALARM AT 10 PPM

WITH RED LIGHT, AND TO ALARM AT 15PPM WITH RED LIGHT AND

AUDIBLE ALARM.

B. HAND OPERATED DETECTORS.

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4. CONDITION FLAGS

A. ONE EACH OF GREEN, YELLOW, AND RED CONDITION FLAGS

TO BE DISPLAYED TO DENOTE CONDITIONS.

**GREEN – NORMAL CONDITION**

**YELLOW – POTENTIAL DANGER**

**RED – DANGER, H2S PRESENT**

B. CONDITIONS FLAG SHALL BE POSTED AT LOCATION SIGN

ENTRANCE.

**EMERGENCY EQUIPMENT REQUIREMENTS (CONT.)**

5. AUXILIARY RESCUE EQUIPMENT

100’ LENGTH OF 5/8” NYLON ROPE.

6. FIRE EXTINGUISHERs

ADEQUATE FIRE EXTINGUISHERS SHALL BE LOCATED AT

STRATEGIC LOCATIONS.

8. BLOW OUT PREVENTION EQUIPMENT.

THE WELL SHALL HAVE HYDRAULIC BOP EQUIPMENT FOR THE

ANTICIPATED BHP OF 800PSI. EQUIPMENT IS TO BE TESTED ON

INSTALLATION.

9. COMBUSTABLE GAS DETECTOR.

THERE SHALL BE ONE COMBUSTIBLE GAS DETECTOR ON LOCATION

AT ALL TIMES.

10. BOP TESTING

BOP AND CHOKE LINE AND KILL LINE WILL BE TESTED.

11. SPECIAL CONTROL EQUIPMENT

A. HYDRAULIC BOP EQUIPMENT WITH CONTROL ON

GROUND.

12. 2 SELF CONTAINED BREATHING APPARATRUS (SCBA)

**EMERGENCY EQUIPMENT REQUIREMENTS (CONT.)**

13. EVACUATION PLAN

EVACUATION ROUTES SHOULD BE ESTABLISHED PRIOR TO

SPUDDING EACH WELL AND DISCUSSED WITH ALL RIG PERSONNEL.

14. DESIGNATED AREA

A. PARKING AND VISITOR AREA: ALL VEHICLES ARE TO BE

PARKED AT A PREDETERMINED SAFE DISTANCE FROM THE

WELLHEAD. THIS WILL BE THE DESIGNATED SMOKING AREA.

B. TWO BRIEFING AREAS ON EITHER SIDE OF THE LOCATION AT

THE MAXIMUM ALLOWABLE DISTANCE FROM THE WELLBORE

SO THEY OFFSET PREVAILING WINDS PERPENDICULARLY, OR AT

A 45-DEGREE ANGLE IF WIND DIRECTION TENDS TO SHIFT.

C. PROTECTION CENTERS OR IF A MOVABLE TRAILER IS USED, IT

SHOULD BE KEPT UPWIND OF EXISTING WINDS. WHEN WIND

IS FROM THE PREVAILING DIRECTIONS, BOTH PROTECTION

CENTERS SHOULD BE ACCESSIBLE.

**STATUS CHECK LIST**

NOTE: ALL ITEMS ON THIS LIST MUST BE COMPLETED BEFORE

DRILLING TO PRODUCTION CASING POINT.

1. SIGN AT LOCATION ENTRANCE.
2. TWO (2) WIND SOCKS LOCATED AS REQUIRED.
3. TWO (2) 30-MINUTE POSITIVE PRESSURE AIR PACKS ON LOCATION
4. AIR PACK INSPECTED FOR READY USE.
5. SAFE BREATHING AREAS SET UP.
6. CONDITION FLAG ON LOCATION AND READY FOR USE.
7. 1 – 100’ LENGTH OF NYLON ROPE ON LOCATION.
8. ALL RIG CREW AND SUPERVISORS TRAINED AS REQUIRED.
9. ALL OUTSIDE SERVICE CONTRACTORS ADVISED OF POTENTIAL H2S

HAZARD OF WELL.

1. NO SMOKING SIGN POSTED.
2. HAND OPERATED H2S DETECTOR ON LOCATION.

CHECKED BY:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_DATE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**PROCEDURAL CHECK LIST**

**PERFORM EACH TOUR:**

1. CHECK FIRE EXTINGUSHERS TO SEE THAT THEY HAVE THE PROPER

CHARGE.

1. CHECK BREATHING EQUIPMENT TO ENSURE THAT IT HAS NOT BEEN

TAMPERED WITH.

1. MAKE SURE ALL THE H2S DETECTION SYSTEM IS OPERATIVE.

**PERFORM EACH WEEK:**

1. BLOW OUT PREVENTER SKILLS.
2. CHECK SUPPLY PRESSURE ON BOP ACCUMLATOR STAND BY

SOURCE.

1. CHECK BREATHING EQUIPMENT MASK ASSEMBLY TO SEE THAT

STRAPS ARE LOOSENED AND TURNED BACK, READY TO PUT ON.

1. CHECK PRESSURE ON BREATHING EQUIPMENT AIR BOTTLES TO

MAKE SURE THEY ARE CHARGED TO FULL VOLUME.

1. PERFORM BREATHING EQUIPMENT DRILLS WITH ON-SITE

PERSONNEL.

1. CHECK THE FOLLOWING SUPPLIES FOR AVAILABITY.

A. EMERGENTY TELEPHONE LIST.

B. HAND OPERATED H2S DETECTORS.

**GENERAL EVACUATION PLAN**

THE DIRECT LINES OF ACTION TO PROTECT THE PUBLIC FROM HAZARDOUS GAS SITUATIONS ARE AS FOLLOWS:

1. WHEN THE COMPANY APPROVED SUPERVISOR (DRILLING FOREMAN, CONSULTANT, RIG PUSHER, OR DRILLER) DETERMINES THE H2S GAS CANNOT BE LIMITED TO THE WELL LOCATION AND

THE PUBLIC WILL BE INVOLVED, HEWILL ACTIVATE THE

EVACUATION PLAN. ESCAPE ROUTES ARE NOTED ON AREA MAP.

2 “COMPANY MAN” OR DESIGNEE WILL NOTIFY LOCAL GOVERNMENT AGENCY THAT A HAZARDOUS CONDITION EXISTS AND EVACUATION NEEDS TO BE IMPLEMENTED.

3. COMPANY SAFETY PERSONNEL THAT HAVE BEEN TRAINED IN THE

USE OF H2S DETECTION EQUIPMENT AND SELF-CONTAINED BREATHING EQUIPMENT WILL MONITOR H2S CONCENTRATIONS, WIND DIRECTIONS, AND AREA OF EXPOSURE.THEY WILL DELINEATE THE OUTER PERIMETER OF THE HAZORDOUS GAS AREA. EXTENSION TO THE EVACUATION AREAWILL BE DETERMINED FROM INFORMATION GATHERED.

4. LAW ENFORCEMENT PERSONNEL (STATE POLICE, POLICE DEPT., FIRE DEPT., ANDSHERIFF’S DEPT.) WILL BE CALLED TO AID IN SETTING UP AND MAINTAINING ROAD BLOCKS. ALSO, THEY WILL AID IN EVACUATION OF THE PUBLIC IC NECESSARY.

**IMPORTANT: LAW ENFORCEMENT PERSONNEL WILL NOT BE ASKED TO COME INTO A CONTAMINATED AREA. THEIR ASSISTANCE WILL BE LIMITED TO UNCONTAMINATED AREAS. CONSTANT CONTACT WILL BE MAINTAINED WITH THEM.**

**5.** AFTER THE DISCHARGE OF GAS HAS BEEN CONTROLLED, COMPANY

SAFETY PERSONNEL WILL DETERMINE WHEN THE AREA IS SAFE

FOR RE-ENTRY.

**EMERGENCY ACTIONS**

WELL BLOWOUT- IF EMERGENCY

1. EVACUATE ALL PERSONNEL IF POSSIBLE.
2. IF SOUR GAS – EVACUATE RIG PERSONNEL.
3. IF SOUR GAS – EVACUATE PUBLIC WITHIN 3000 FT RADIUS OF

EXPOSURE.

1. DON SCBA AND RESCUE
2. CALL 911 FOR EMERGENCY HELP (FIRE DEPT AND AMBULANCE)

AND NOTIFY SR. DRILLING FOREMAN AND DISTRICT FOREMAN.

1. GIVE FIRST AID.

PERSON DOWN LOCATION/FACILITY

1. IF IMMEDIATELY POSSIBLE, CONTACT 911. GIVE LOCATION AND

WAIT FOR CONFIRMATION.

1. DON SCBA AND RESCUE.

**TOXIC EFFECTS OF HYDROGEN SULFIDE.**

HYDROGEN SULFIDE IS EXTREMELY TOXIC. THE ACCEPTABLE CEILING

CONCENTRATION FOR EIGHT-HOUR EXPOSURE IS 10 PPM, WHICH IS .001%

BY VOLUME. HYDROGEN SULFIDE IS HEAVIER THAN AIR. (SPECIFIC

GRAVITY – 1.192) AND COLORLESS. IT FORMS AN EXPLOSIVE MIXTURE

WITH AIR BETWEEN 4.3 AND 46.0 PERCENT BY VOLUME. HYDROGEN

SULFIDE IS ALMOST AS TOXIC AS HYDROGEN CYANIDE AND IS BETWEEN

FIVE AND SIX TIMES MORE TOXIC THAN CARBON MONOXIDE. TOXICITY

DATA FOR HYDROGEN SULFIDE AND VARIOUS OTHER GASES ARE

COMPARED IN TABLE I.PHYSICAL EFFECTS AT VARIOUS HYDROGEN

SULFIDE EXPOSURE LEVELS ARE SHOWN IN TABLE II.

TABLE I

TOXICITY OF VARIOUS GASES



1. THRESHOLD LIMIT – CONCENTRATION AT WHICH IT IS BELIEVE THAT ALL WORKERS MAY BE REPEATEDLY EXPOSED DAY AFTER DAY WHITHOUT ADVERSE EFFECTS.

2) HAZARDOUSLIMIT – CONCENTRATION THATWILL CAUSE DEATH WITH SHORT – TERM EXPOSURE.

3) LETHAL CONCENTRATION – CONCENTRATION THAT WILL CAUSE IMMEDIATE DEATH WITH SHORT – TERM EXPOSURE

**TOXIC EFFECTS OF HYDROGEN SULFIDE (CONT.)**

TABLE II

PHYSICAL EFFECTS OF HYDROGEN SULFIDE

\*AT 15.00 PSIA AND 60’F.



**USE OF SELF-CONTAINED BREATHING EQUIPMENT**

1. WRITTEN PROCEDURES SHALL BE PREPARED COVERING SAFE USE

OF SCBA’S IN DANGEROUS ATMOSPHERE, WHICH MIGHT BE

ENCOUNTERED IN NORMAL OPERATION OR IN EMERGENCIES.

PERSONNEL SHALL BE FAMILIAR WITH THESE PROCEDURES AND

THE AVAILABLE SCBA.

2. SCBA’S SHALL BE INSPECTED FREQUENTLY AT RANDOM TO INSURE

THAT THEY ARE PROPERLY USED, CLEANED, AND MAINTAINED.

3. ANYONE WHO MAY USE THE SCBA’S SHALL BE TRAINED IN HOW TO

INSURE PROPER FACE-PIECE TO FACE SEAL THEY SHALL WEAR

SBCA’S IN NORMAL AIR AND THEN WEAR THEM IN A TEST

ATMOSPHERE. (NOTE: SUCH ITEMS AS FACIAL HAIR{BEARD OR

SIDEBURNS} AND EYEGLASSESWILL NOT ALLOW PROPER SEAL).

ANYONE THAT MAY BE REASONABLY EXPECTED TO WEAR SCBA’S

SHOULD HAVE THESE ITEMS REMOVED BEFORE ENTERING A TOXIC

ATMOSPHERE. A SPECIAL MASK MUST BE OBTAINED FOR ANYONE

WHO MUST WEAR EYEGLASSES OR CONTACT LENSES.

4. MAINTENANCE AND CARE OF SCBA’S:

A. A PROGRAM FOR MAINTENAANCE AND CARE OF SCBA’SHALL

INCLUDE THE FOLLOWING:

1. INSPECTION FOR DEFECTS, INCLUDING LEAK CHECKS.

2. CLEANING AND DISFECTING.

3. REPAIR.

4. STORAGE.

B. INSPECTION; SELF-CONTAINED BREATHING APPARATUS FOR

EMERGENCY USE SHALL BE INSPECTED MONTHLY FOR THE

FOLLOWING: PERMANENT RECORDS KEPT OF THESE

INSPECTIONS.

1. FULLY CHARGED CYLINDERS.

2. REGULATOR AND WARNING DEVICE OPERATION.

3. CONDITION OF FACE PIECE AND CONNECTIONS.

4. ELASTOMER OR RUBBER PARTS SHALL BE STRETCHED

OR MASSAGED TO KEEP THEM PLIABLE AND PREVENT

DETERIORATION.

C. ROUTINELY USED SCBA’S SHALL BE COLLECTED, CLEANED AND DISINFECTED AS FREQUENTLY AS NECESSARY TO INSURE PROPER PROTECTION IS PROVIDED.

**USE OF SELF-CONTAINED BREATHING EQUIPMENT (CONT.)**

5. PERSONS ASSIGNED TASKS THAT REQUIRESUSE OF SELF-

CONTAINED BREATHING EQUIPMENT SHALL BE CERTIFIED

PHYSICALLY FIT FOR BREATHING EQUIPMENT USUAGE BY THE

LOCAL COMPANY PHYSICIAN AT LEAST ANNUALLY.

6. SCBA’S SHOULD BE WORN WHEN:

A. ANY EMPLOYEE WORKS NEAR THE TOP OR ON TOP OF ANY

TANK UNLESS TEST REVEALS LESS THAN 10 PPM OF H2S.

B. WHEN BREAKING OUT ANY LINE WHERE H2S CAN

REASONABLY BE EXPECTED.

C. WHEN SAMPLING AIR IN AREAS TO DETERMINE IF TOXIC

CONCENTRATIONS OF H2S EXIST.

D. WHEN WORKING IN AREAS WHERE OVER 10 PPM H2S HAS

BEEN DETECTED.

E. AT ANY TIME THERE IS A DOUBT AS TO THE H2S LEVEL IN THE

AREA TO BE ENTERED.

**RESCUE**

**FIRST AID FOR H2S POISONING**

**DO NOT PANIC. REMAIN CALM. THINK!**

1. HOLD YOUR BREATH. (DO NOT INHALE FIRST; STOP BREATHING.)

2. PUT ON BREATHING APPARATUS.

3. REMOVE VICTIM(S) TO FRESH AIR AS QUICKLY AS POSSIBLE. (GO

UP-WIND FROM SOURCE OR AT RIGHT ANGLE TO THE WIND. NOT

DOWN-WIND).

4. PERFORM CPR IF REQUIRED.

5. PROVIDE FOR PROMPT TRANSPORTATION TO THE HOSPITAL, AND

CONTINUE GIVING CPR IF NEEDED.

6. HOSPITAL(S) OR MEDICAL FACILITIES NEED TO BE INFORMED,

BEFORE-HAND, OF THE POSSIBILITY OR H2S GAS POISONING – NO

MATTER HOW REMOTE THE POSSIBLITY IS.

7. NOTIFY EMERGENCY ROOM PERSONNEL THAT THE VICTIM(S) HAS

BEEN EXPOSED TO H2S GAS.

BESIDES BASIC FIRST AID, EVERYONE ON LOCATION SHOULD HAVE A

GOOD WORKING KNOWLEDGE OF CPR, AS WELL AS FIRST AID FOR EYES AND SKIN CONTACT WITH LIQUID H2S. EVERYONE NEEDS TO MASTER THESE NECESSARY SKILLS.

**EMERGENCY CONTACTS**

**PRONGHORN OPERATING, LLC (OPERATOR) PERSONNEL:**

Zane Kuenzler Company Foreman Office: (303) 220-0795

Cell: (720) 261-2019

Jake Flora Company Foreman Office: (303) 220-0795

Cell: (720) 988-5375

**WILDCAT DRILLING COMPANY (CONTRACTOR) PERSONNEL:**

Josh Kliesen Toolpusher Cell (719) 688-2591

Jack Reyser Rig Owner Office (785) 767-5100

**CHEYENNE COUNTY, COLORADO:**

All Emergencies 911

Sheriff’s Office/Police Direct Number to Dispatch (719) 767-5633

**GOVERNMENT AGENCIES TO BE NOTIFIED IN CASE OF EMERGENCY:**

National Response Center (800) 424-8802

COGCC Field Representative/Craig Quint (719) 767-8939 Office

(719) 342-5702 Cell

**AREA RESIDENTS**

**Residences within 3,000’: Greg Roth**

**Phone (719) 767-5552**

**Nearest Residence: SESE Section 5 14S 44W**

**Names/Number of Residents: Greg Roth**

**P.O. Box 546**

**Cheyenne Wells, CO 80810**

**(719) 767-5553**

**Livestock within 3,000: None**

**Location & Approximate #: N/A**