



**Alabama Coal Association**



## **2013 Day 2 Problem Briefing**



**Beville State Community College**

# 2013 ACA DAY 2

## Statement

**You are located on the surface of RT # 16 mine. This is a new highwall mine that just started production a few months ago. Thanks for answering our call for help.**

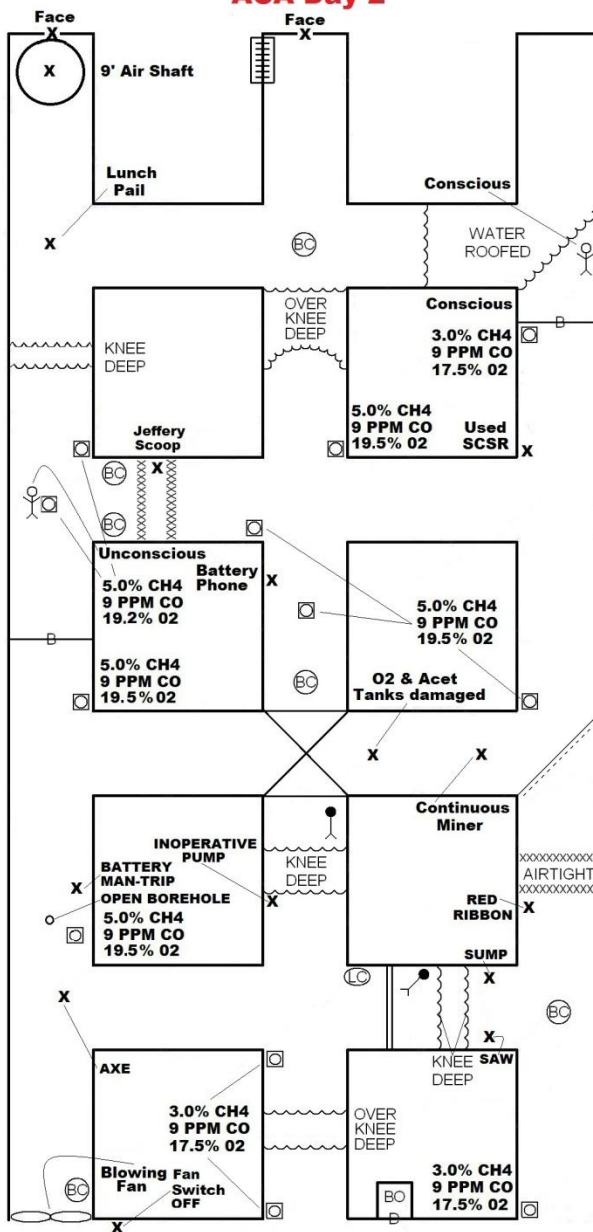
**A short time ago, a foreman and a 3 man crew entered the mine to clean up around the new air shaft in no.1 entry and do some work on the continuous miner. We are pretty sure they were going to use a cutting torch to repair the miner. Just a few minutes ago, we felt the office trailer move and saw some small debris fly from the portals. We tried to enter the portals but found conditions unsafe for us to explore. The mine has had numerous problems with water, methane and bad roof. The mine liberates high amounts of methane every day and the mine has had several roof falls in the last month.**

**The blowing fan is off, but can be started by using the fan switch located near the fan. The power going underground has been locked out and is being guarded. A trained mine rescue team is here to back you up and the mine maps that you will receive once the clock is started are up to date.**

**The mine is equipped with a new communication and tracking system that we hope can be useful to you as you explore. We will let you know if we can give you further information about the last known location of the missing miners as soon as we can.**

**Please be careful and let us know when are ready to begin.**

## ACA Day 2



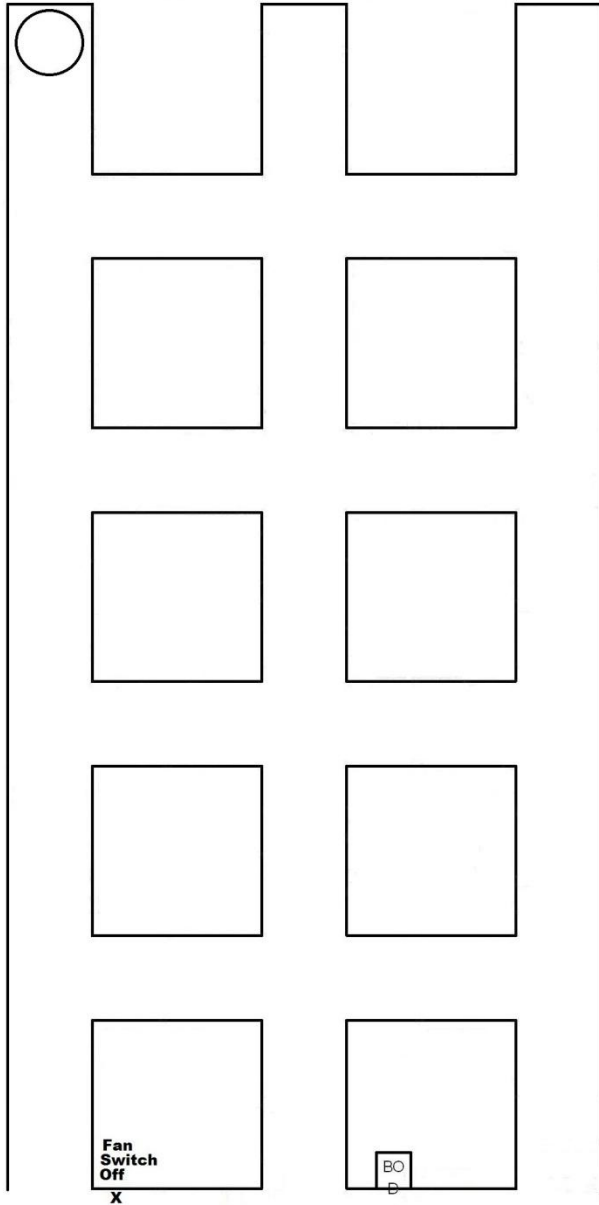
# 2013 ACA Contest

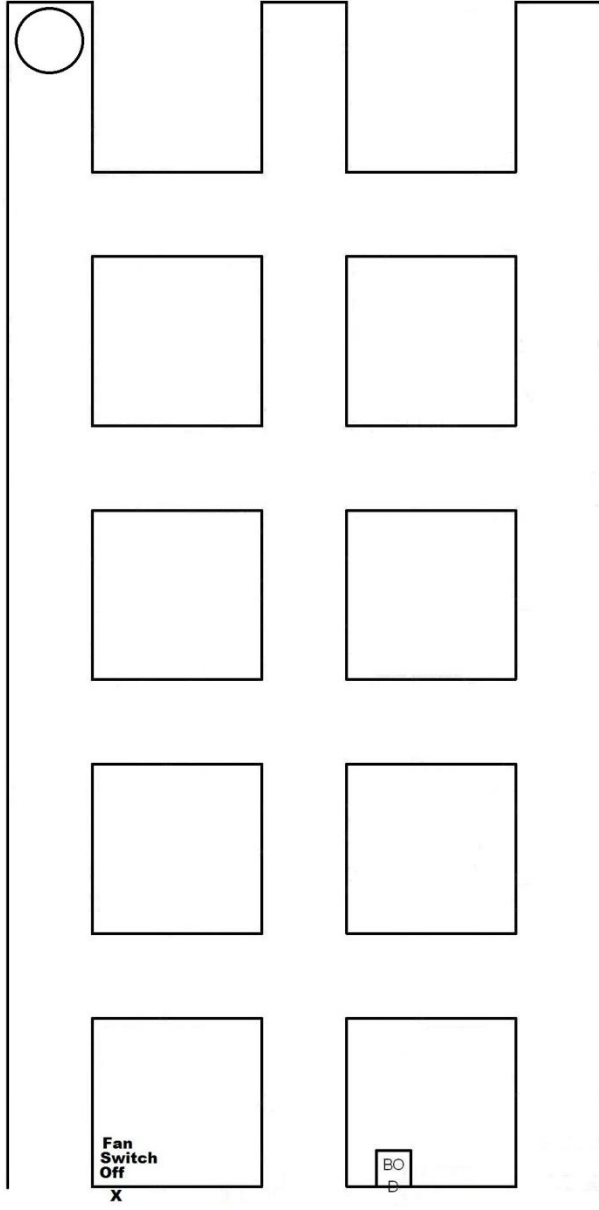
## Day 2

### Problem

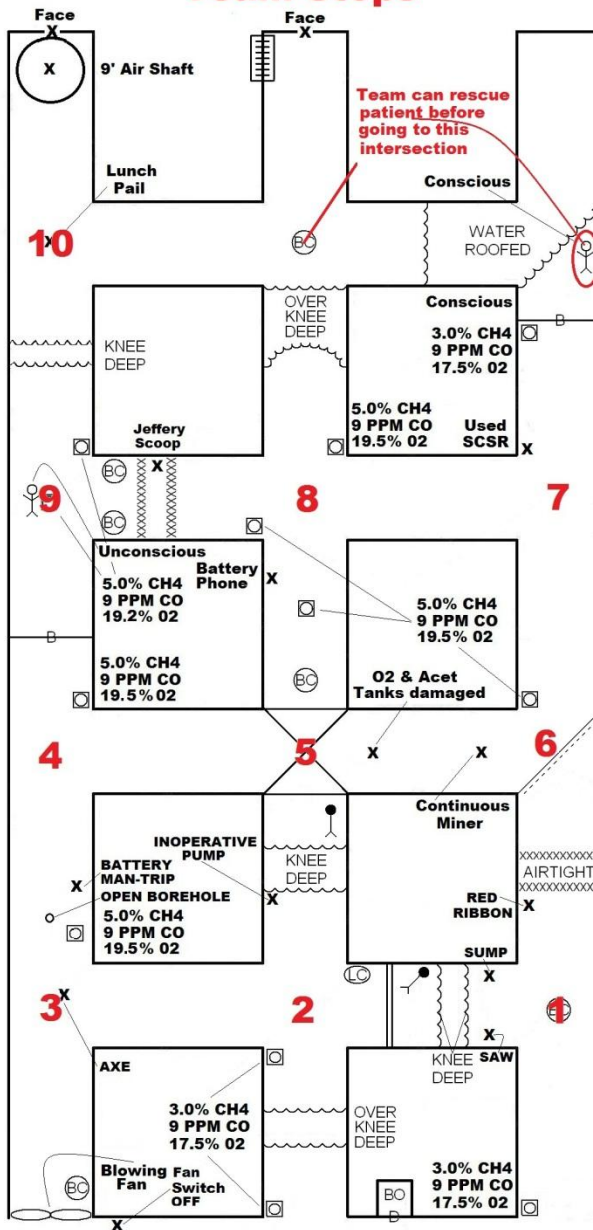
#### (Written Instructions)

- **YOU CAN ONLY CARRY TWO SETS OF BRATTICE CLOTH WITH YOU AT A TIME**
- **ACCOUNT FOR THE MISSING MINERS AND BRING LIVE PERSONS OUTSIDE**
- **BARRICADES AND STOPPINGS FOUND INTACT CANNOT BE MOVED FROM LOCATION FOUND. THEY CAN BE TAKEN DOWN AND PUT BACK UP IF NEEDED**
- **REPORT ALL IRRESPIRABLE ATMOSPHERES FOUND TO THE SUPERINTENDENT BEFORE MOVING TO NEXT TEAM STOP**
- **THE BLOWING FAN CANNOT BE REVERSED**
- **THE BLOWING FAN CAN BE STOPPED AND STARTED AT THE FAN SWITCH**
- **YOU WILL HAVE 75 MINUTES TO WORK BEFORE BEING REPLACED BY ANOTHER TEAM**
- **BO IS OUTSIDE AND ISOLATED**





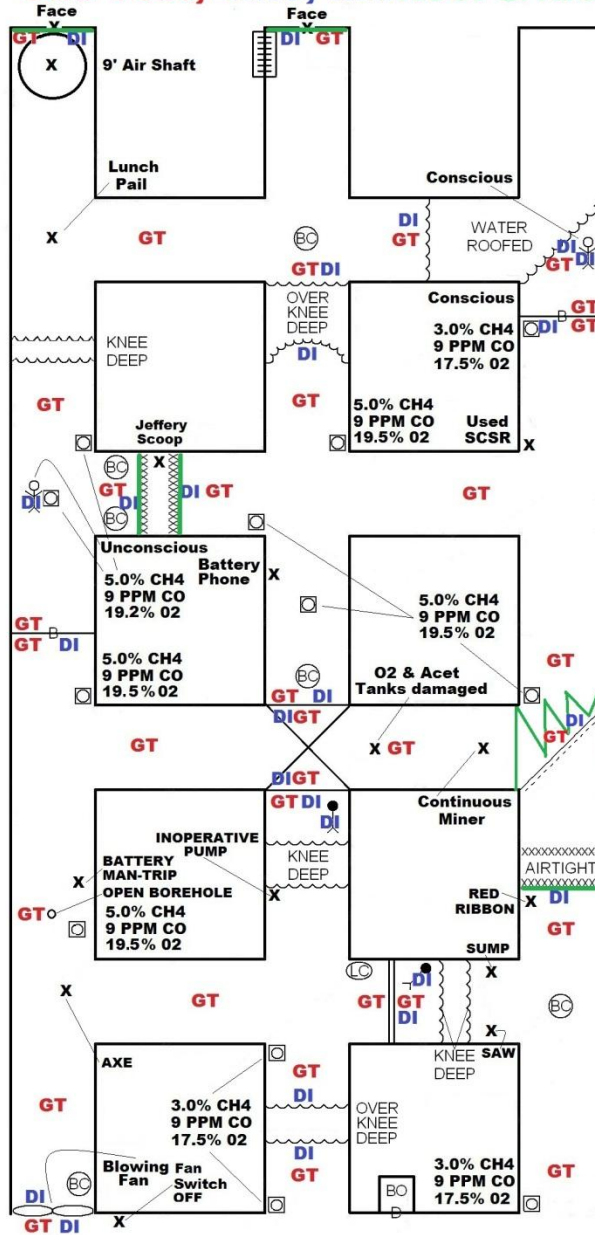
# Team Stops



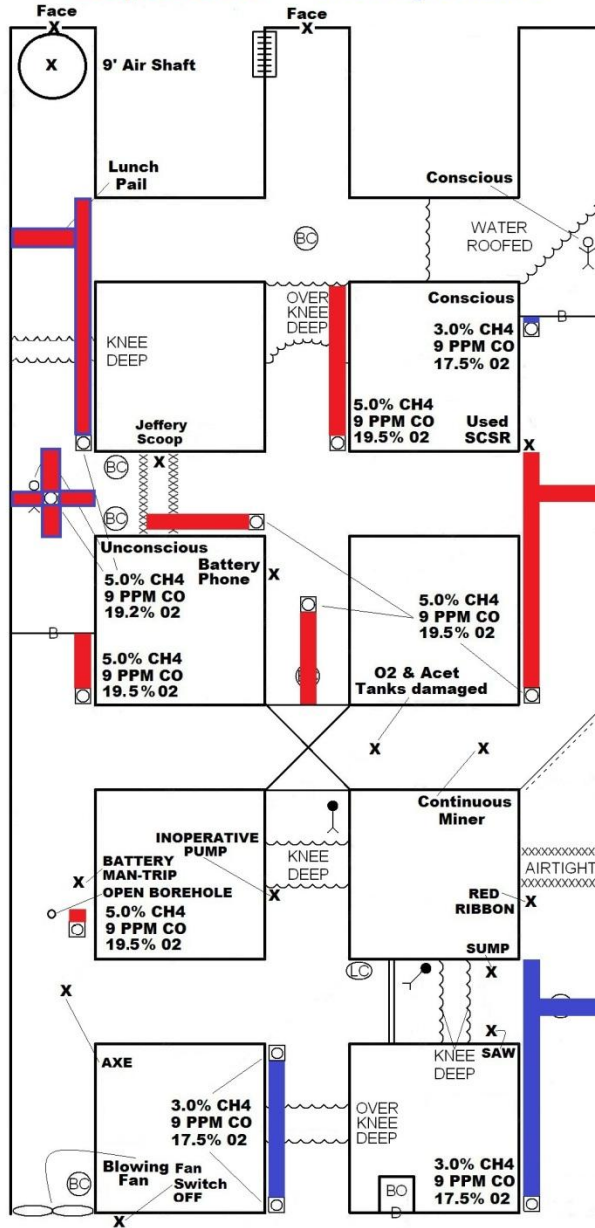
PATIENT STATEMENT  
IN BARRICADE IN  
NO.3 ENTRY INBY 3rd  
CROSSCUT

**Help! Get me out of here!**  
**It's airtight behind me!**

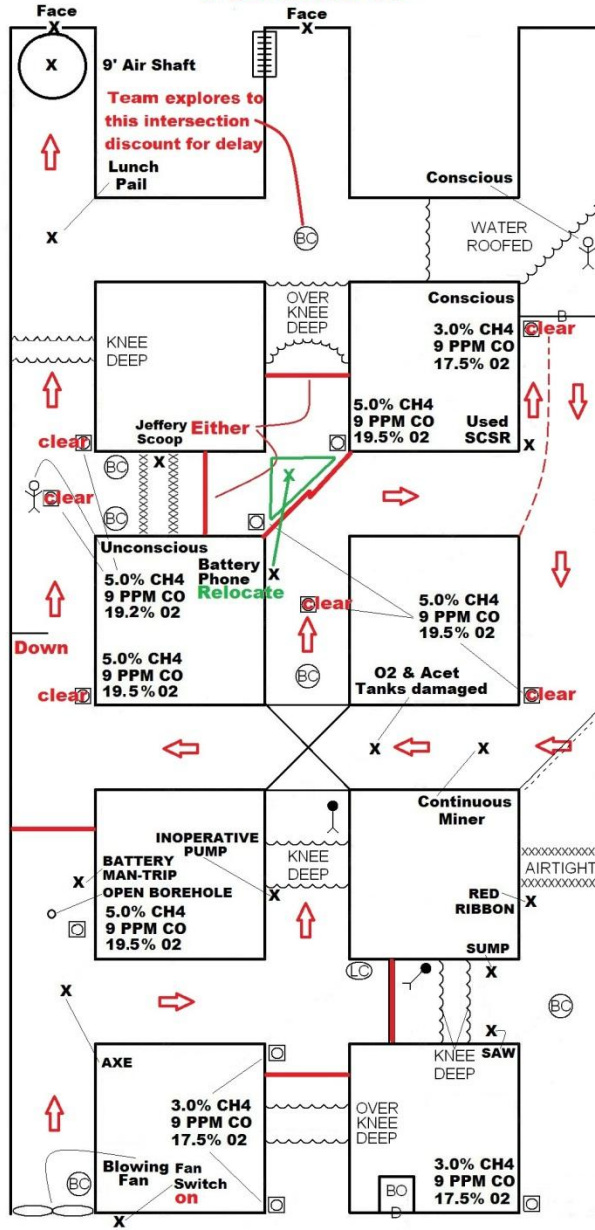
# Gas Test, Date, Int. Roof & Rib



# Explosive      Irrespirable



# Ventilation



# Keys to Problem

- Team cannot sweep small area of explosive mixture just outby open borehole in no.1 entry
- Team can airlock and breach barricade in no.1 entry with 19.5% O<sub>2</sub> in front, but no.5 man cannot go inby the outby crosscut until team explores across and then up no.3 entry and finds end of the contaminant
- Put Care Vent or apparatus on unconscious man
- Battery phone can only be placed in the upper left portion of the inby intersection, then angle stopping can be built to protect phone from explosive mixture during ventilation
- Team can send explosive mixture and irrespirable over unsafe roof in no.3 entry second crosscut
- Team does not need to airlock into barricade in no.3 entry after vent
- Team must not advance to last open crosscut in no.2 entry before rescuing patient in barricade in no.3 entry
- Team does not have to explore the entire
- Team may put FPA on both maps after rescuing patient and not go back in the mines
- Team may go back in and make no.2 entry last open crosscut...just cost them time and other possible rule discounts if done incorrectly