

KCA Regional Skills Contest

April 11, 2013

Mine Rescue Problem



Problem Briefing

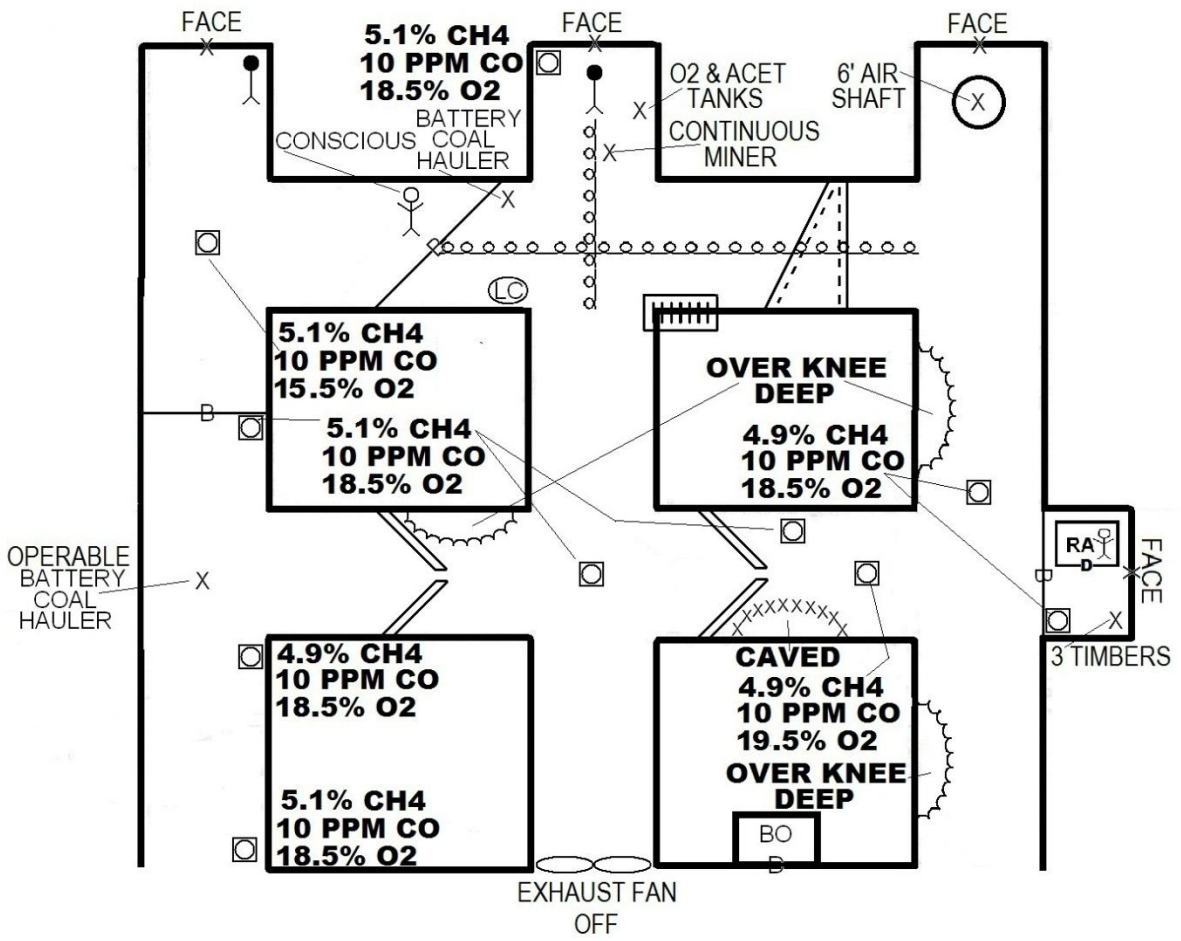
2013 KCA Skills Statement

You are located on the surface of Big Blue Wildcat #8 mine. This mine is being started again after being idle for several months. The past owner ran into money problems after losing his coal contract at TVA.

This morning a foreman and a 3 man crew entered the mine to run early coal. The foreman called out about an hour ago and said the continuous miner was down. He also said that they were going to weld the cable horn back on the miner while it was down. Just a few moments after the phone call, we heard what we thought was an explosion. Dust and debris was seen coming from all 3 openings. We tried to contact the crew by phone and could not reach anyone. We found CO, low O2 and high methane just inside the no. 1 entry and we decided to call a trained mine rescue team to help us. The power knocked going to the fan just a few minutes ago and we are working to get the power restored. We do have an air shaft in the no.3 entry. Please let the Superintendent know if you need to use the exhaust fan.

The maps are up to date.

We have a trained mine rescue team ready to back you up and have notified all authorities. Please be careful!



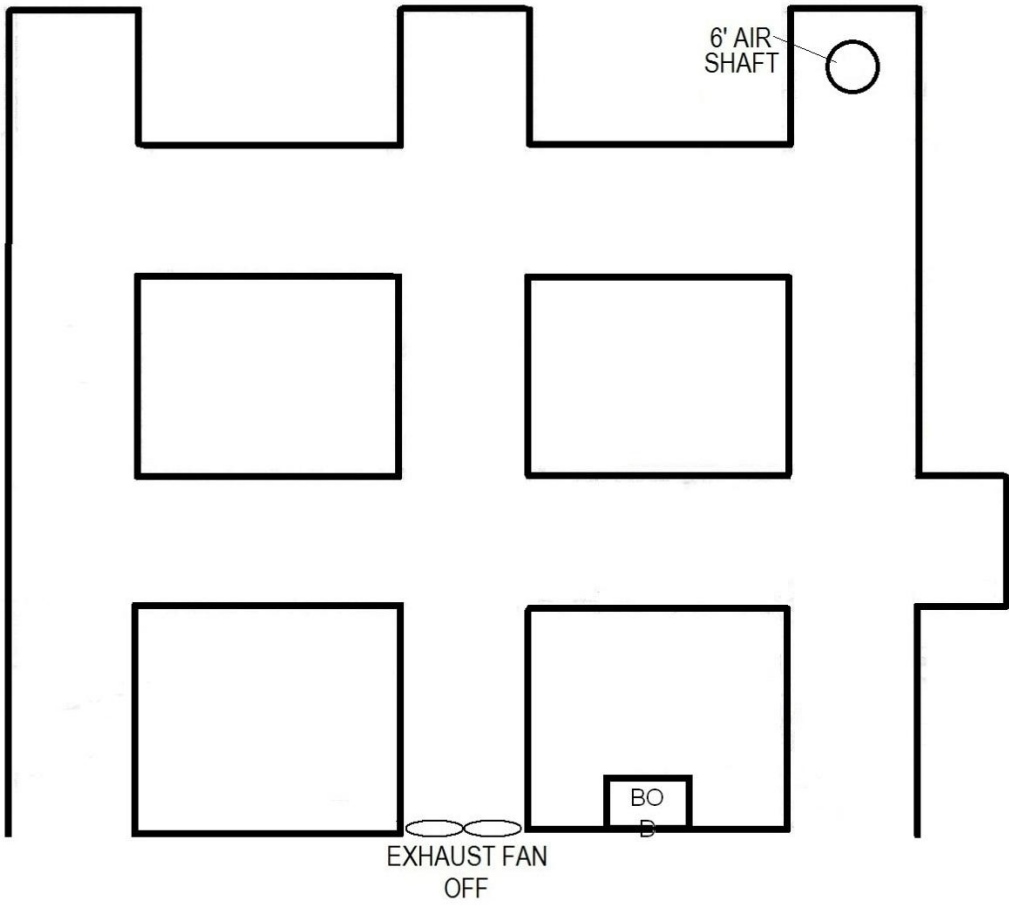
KCA Skills Contest

Problem

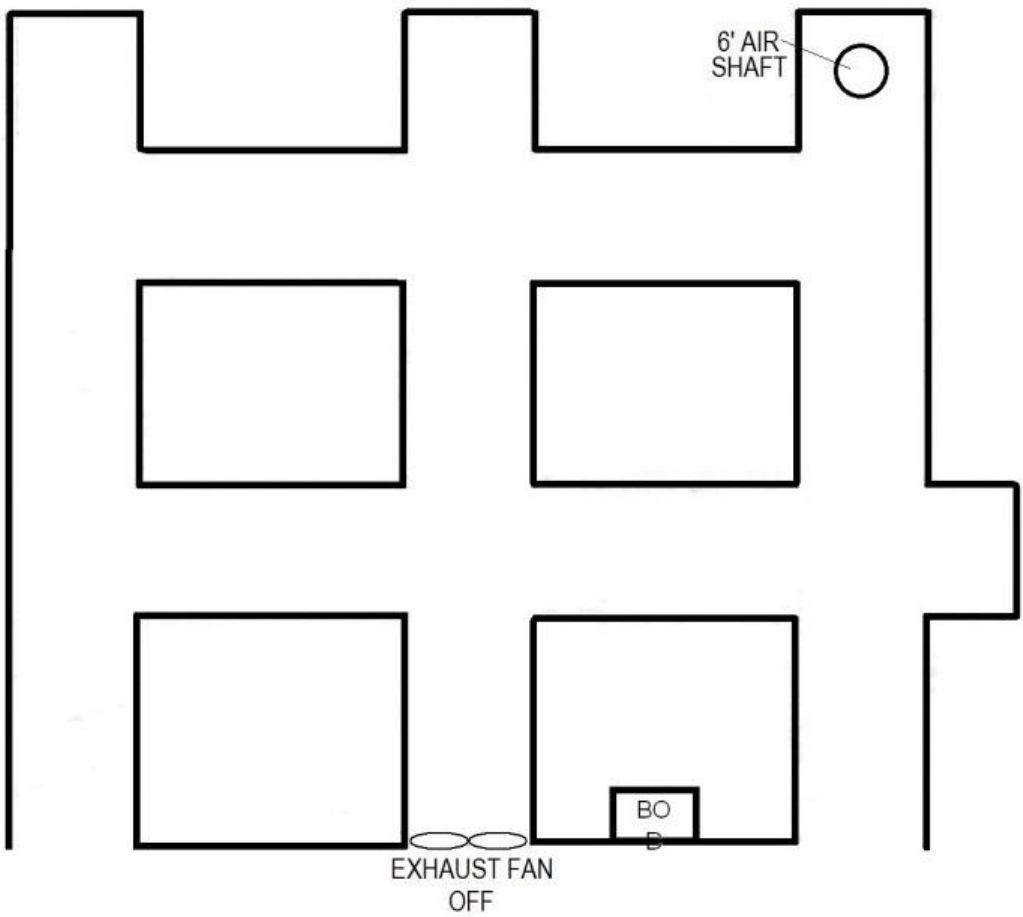
(Written Instructions)

- **ACCOUNT FOR THE MISSING MINERS**
- **BRING LIVE PERSONS OUTSIDE**
- **REPORT ALL EXPLOSIVE MIXTURES TO THE SUPERINTENDENT BEFORE MOVING TO NEXT TEAM STOP**
- **THE EXHAUST FAN CAN BE STARTED AND STOPPED BY ASKING THE SUPERINTENDENT**
- **THE EXHAUST FAN CAN BE REVERSED**
- **BO IS OUTSIDE AND ISOLATED**

**Team
Map**



**BO
Map**



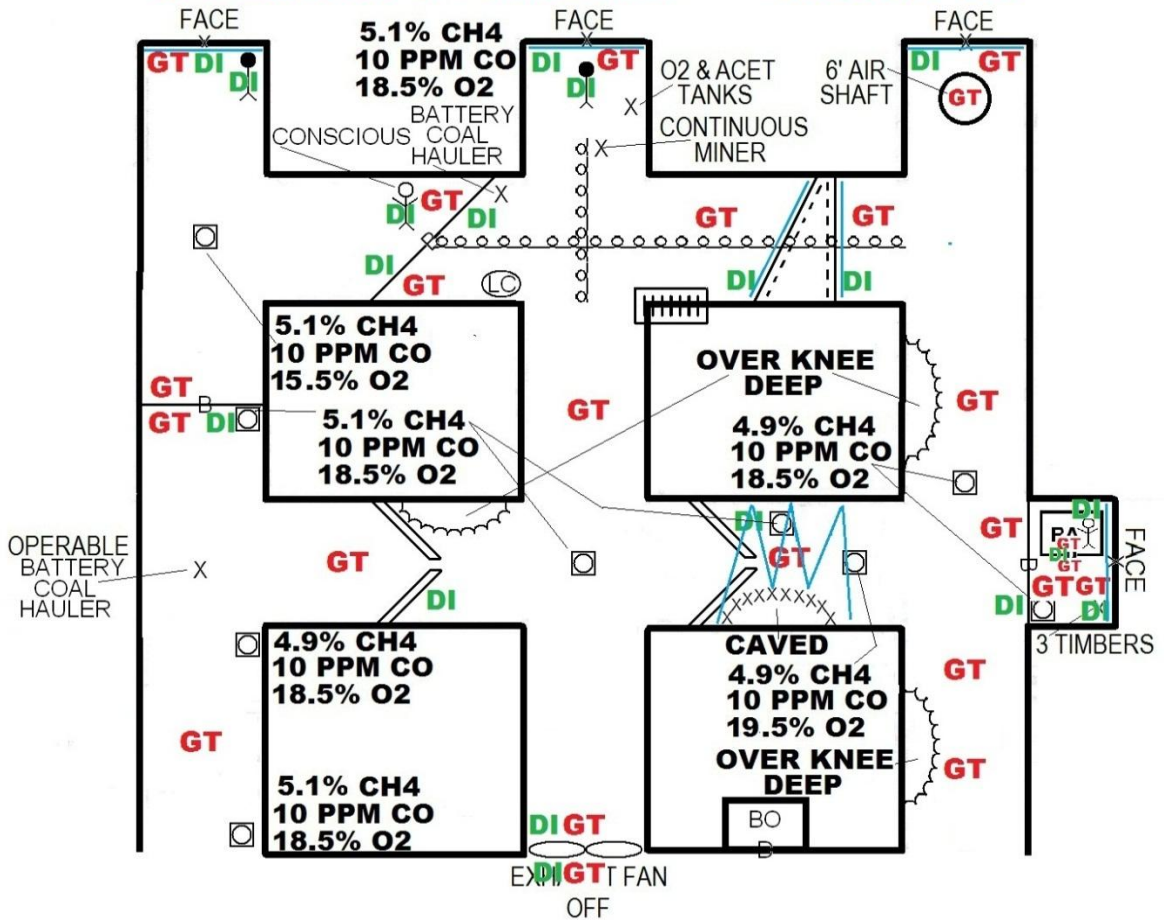
PATIENT STATEMENT
IN RA BEHIND
BARRICADE

Help ! I'm in an RA with a
airtight face behind the
RA!

PATIENT STATEMENT
BEHIND ANGLE
BARRICADE IN LAST
OPEN

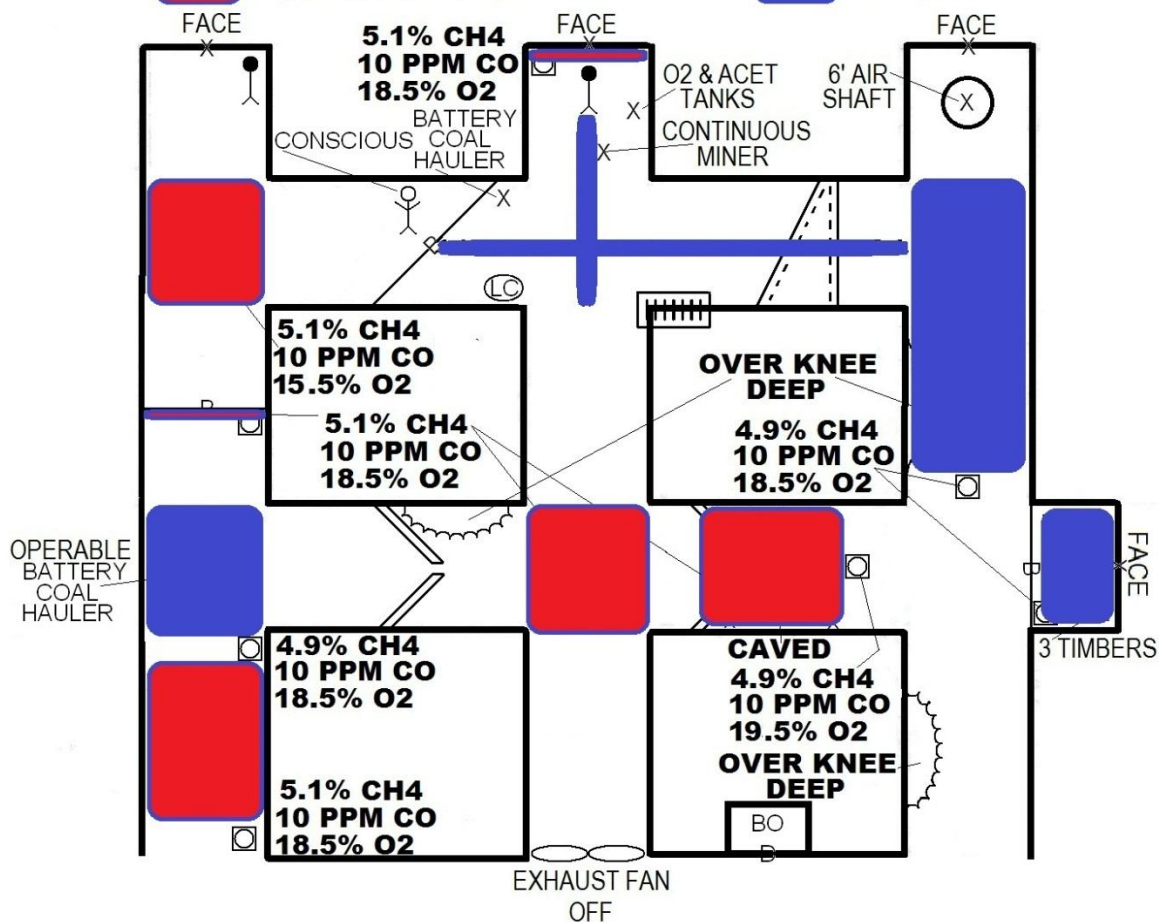
Help! It's airtight behind me!

GT = Gas Tests **DI = Date & Initial** **— = Roof & Rib Test**

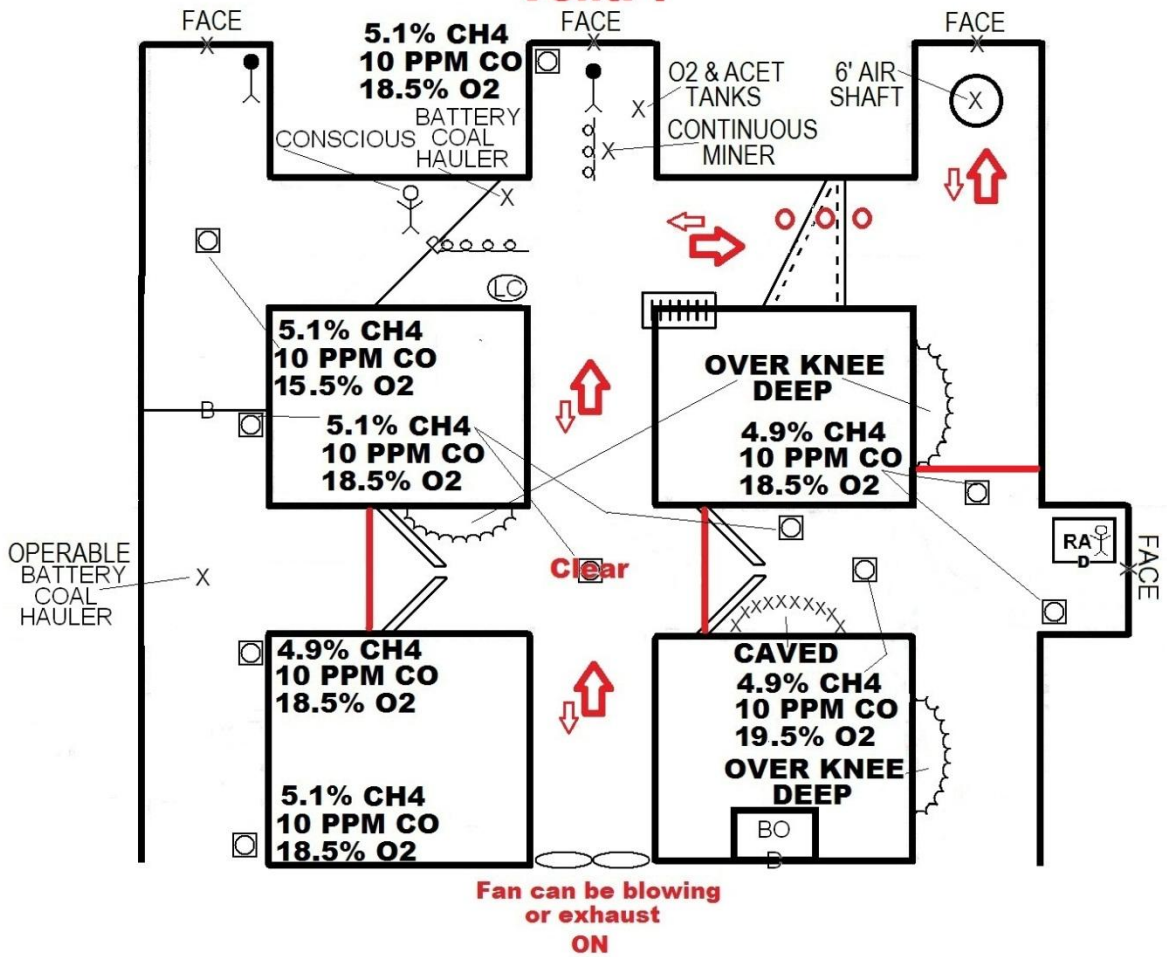


Gas Extents

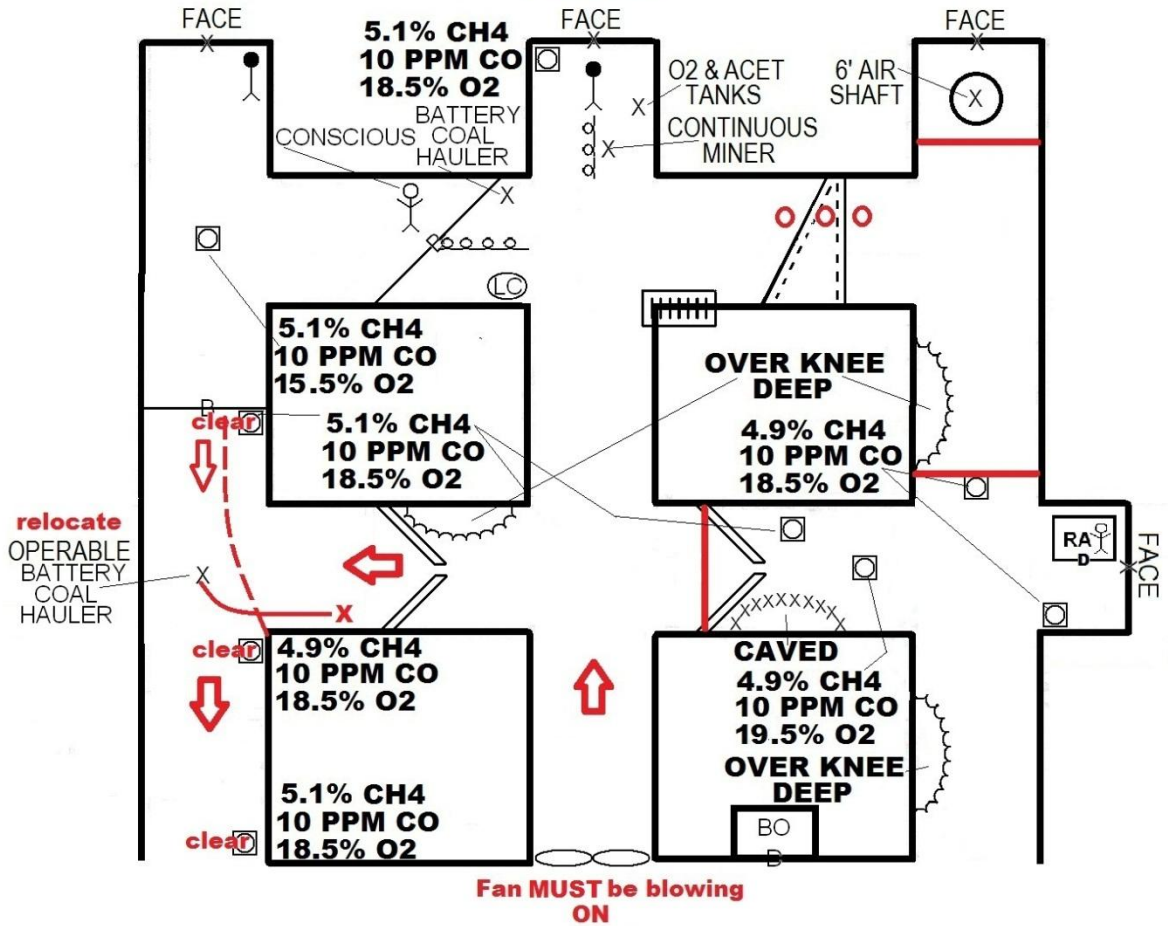
Explosive & Irrespirable **Irrespirable**



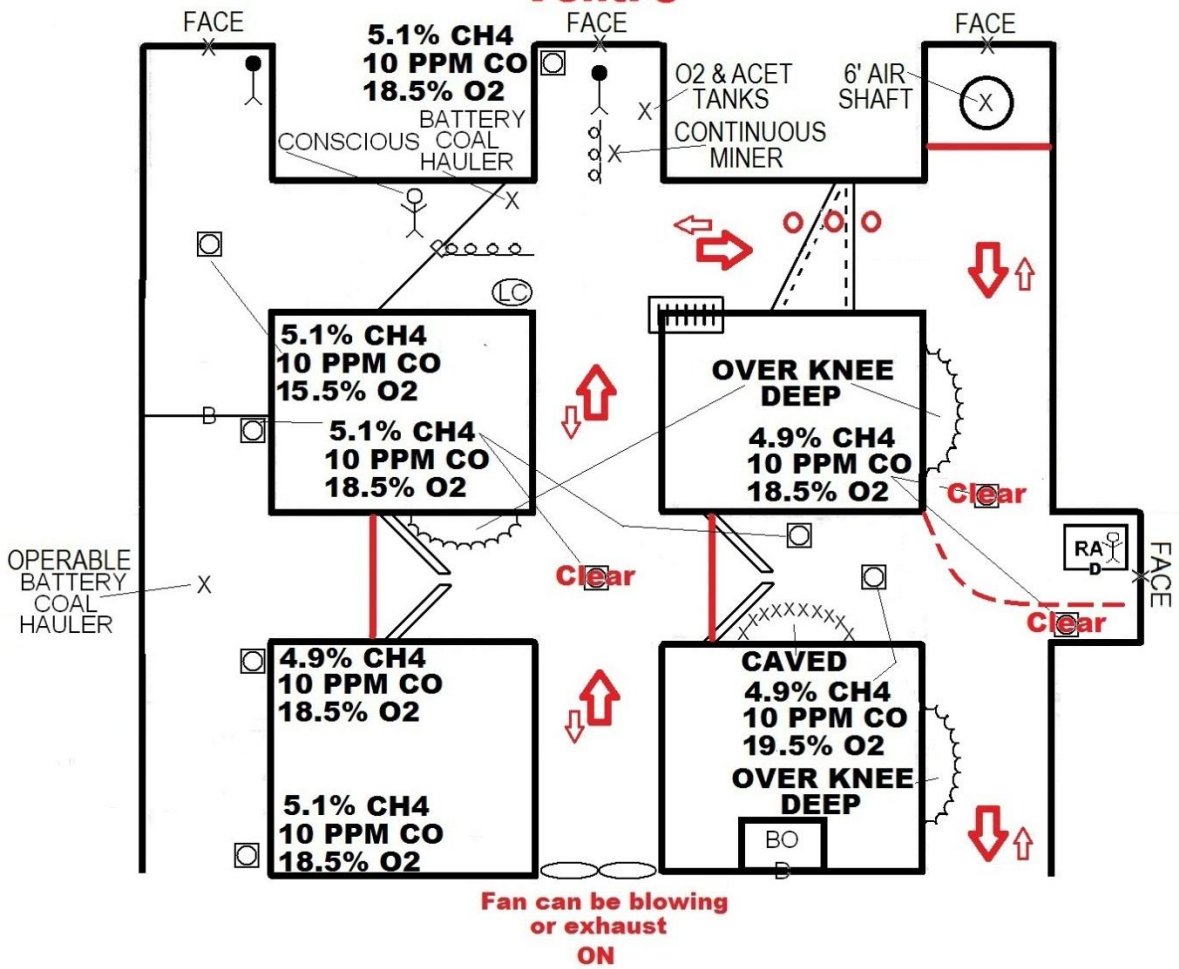
Vent. 1



Vent. 2



Vent. 3



Keys to Problem

- Breach Barricade where patient is in RA at team stop # 3
- Team cannot rescue patient in RA until all missing miners are located
- Not sending any explosive mixture over batteries, water over knee deep or caved areas.
- Timbering thru unsafe roof in last open crosscut
- Moving the operable battery coal hauler before 2nd Vent.
- Not sending irrespirable atmosphere over water over knee deep or caved area until all missing miners are located
- When team asks about the fan, tell them power has been restored