

2014 KCA Regional Skills Contest

April 10, 2014

A photograph showing a firefighter in silhouette, wearing a helmet and carrying a hose, working in a dark, smoky environment. The firefighter is positioned in the center-right of the frame, facing away from the camera towards a bright, glowing area of fire or smoke. The scene is dimly lit, with a strong light source from the left casting a beam of light across the scene. The background is filled with thick, dark smoke, and the overall atmosphere is one of a controlled fire environment, likely a skills contest arena.

Problem Statement

You are located on the surface of the M R Mine. This is a new 3 entry mine that is developing the main entries to turn left and right in the near future.

The 3rd shift foreman sent a 3 man crew up to the section to fix the continuous miner and finish the cut so it could be bolted.

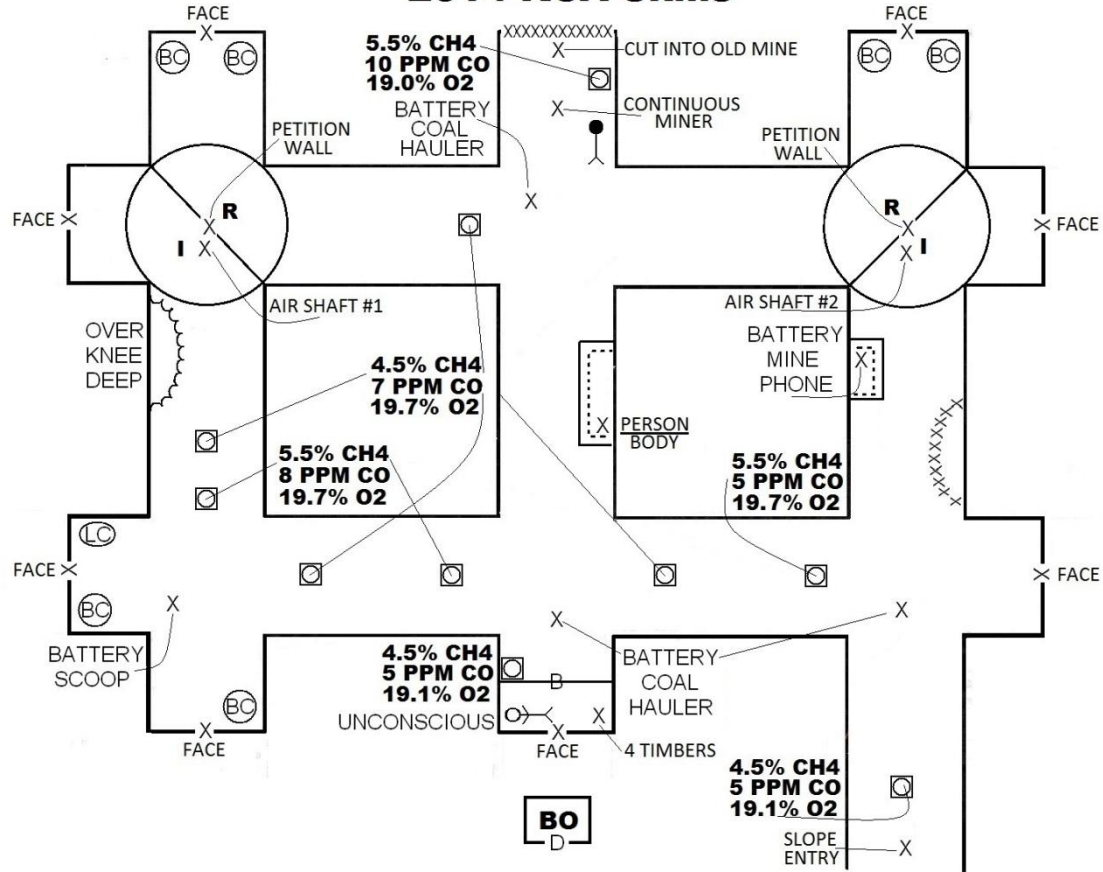
A loud boom was heard about 2 hours ago and we tried to enter the slope but found low O2 and methane. The tracking system shows all 3 men are still on the section. Phone communication has been unsuccessful.

We have two split air shafts that are being used for ventilation. Each split shaft has a blowing fan on top of the intake side and air can return on the other side of each shaft. Power was knocked on both fans, but has been restored and either fan can be turned on or off by asking the superintendent .

There is a trained mine rescue team here to back you up and the power has been locked out and guarded. The maps were up to date as of yesterday and will show each air shaft.

Please be careful and find our miners.

2014 KCA Skills



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Written Instructions

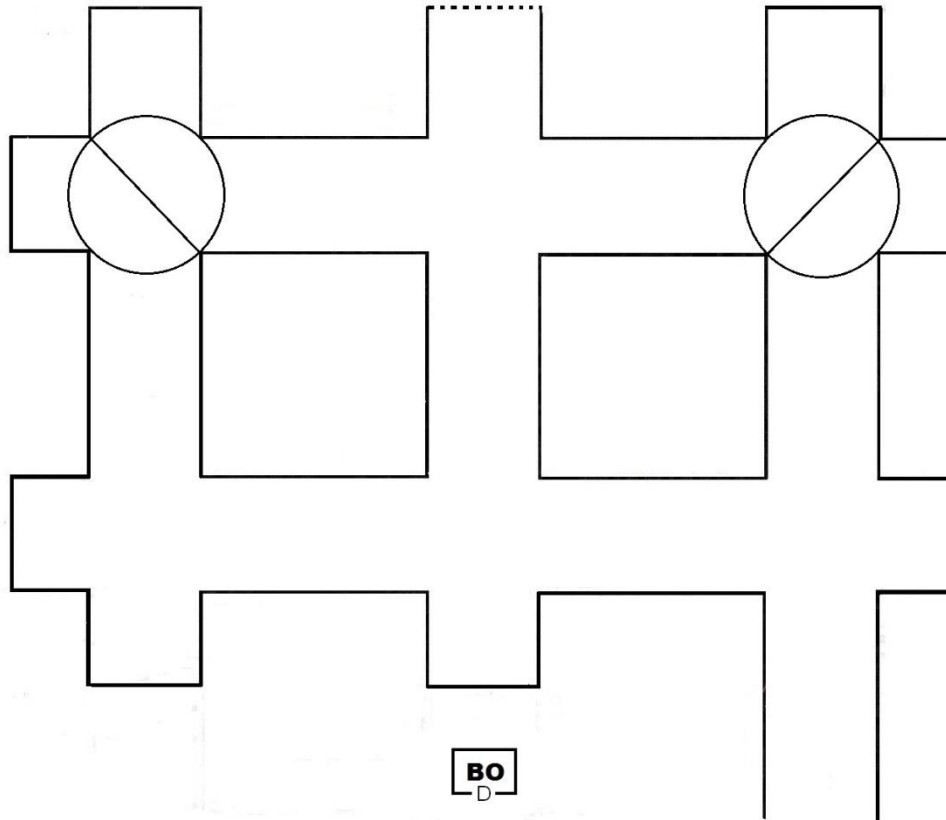
ACCOUNT FOR ALL MISSING MINERS

**BRIEFING OFFICER MUST GIVE EXPLOSIVE
MIXTURES NUMBERS IN WRITING TO
SUPERINTENDENT BEFORE MOVING TO NEXT
TEAM STOP**

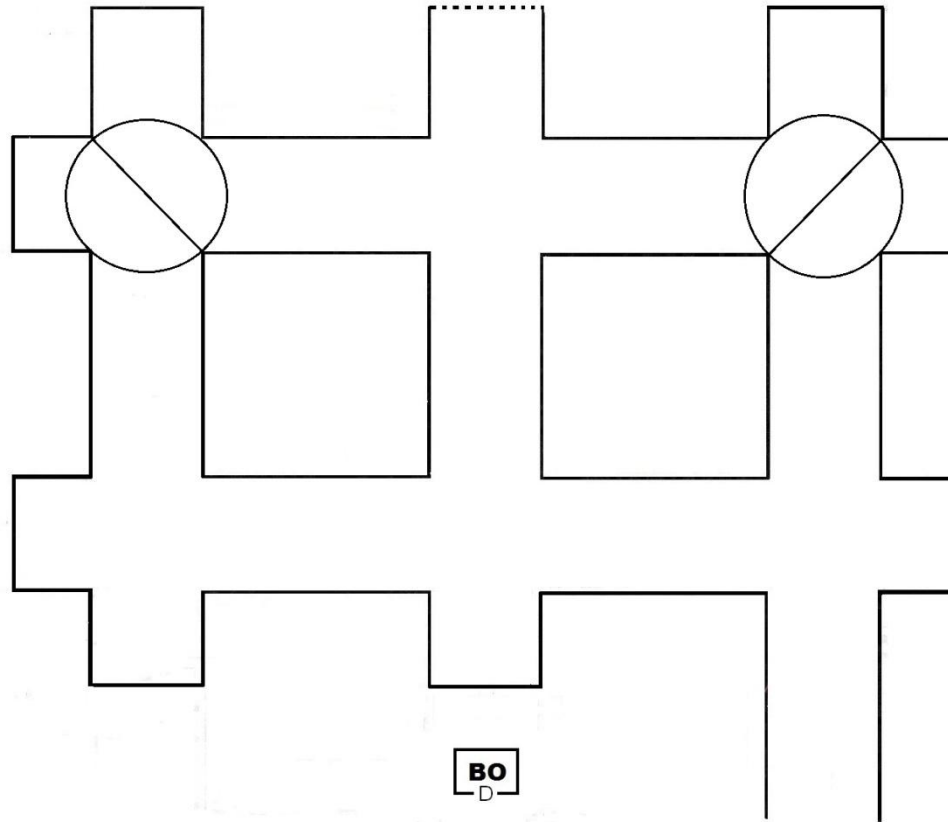
THE BLOWING FANS CANNOT BE REVERSED

**THE BRIEFING OFFICER HAS BEEN ISOLATED AND
MUST REMAIN IN A RESPIRABLE ATMOSPHERE**

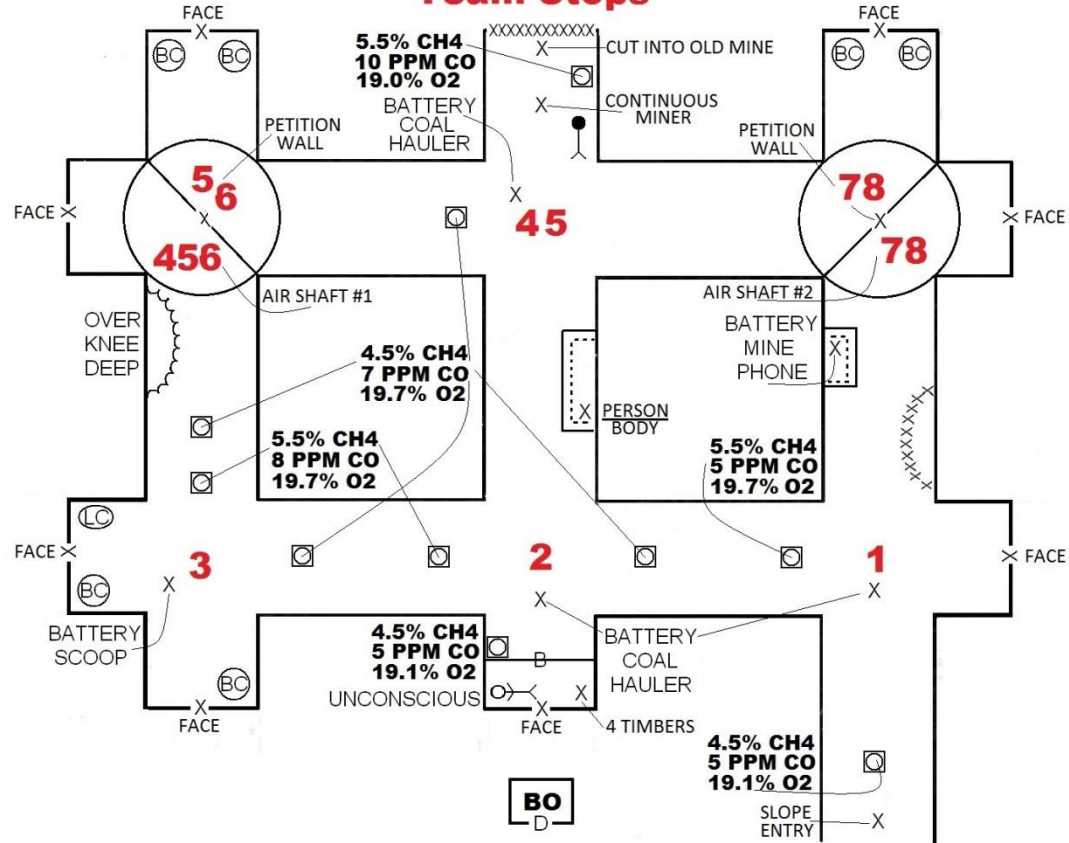
TEAM MAP



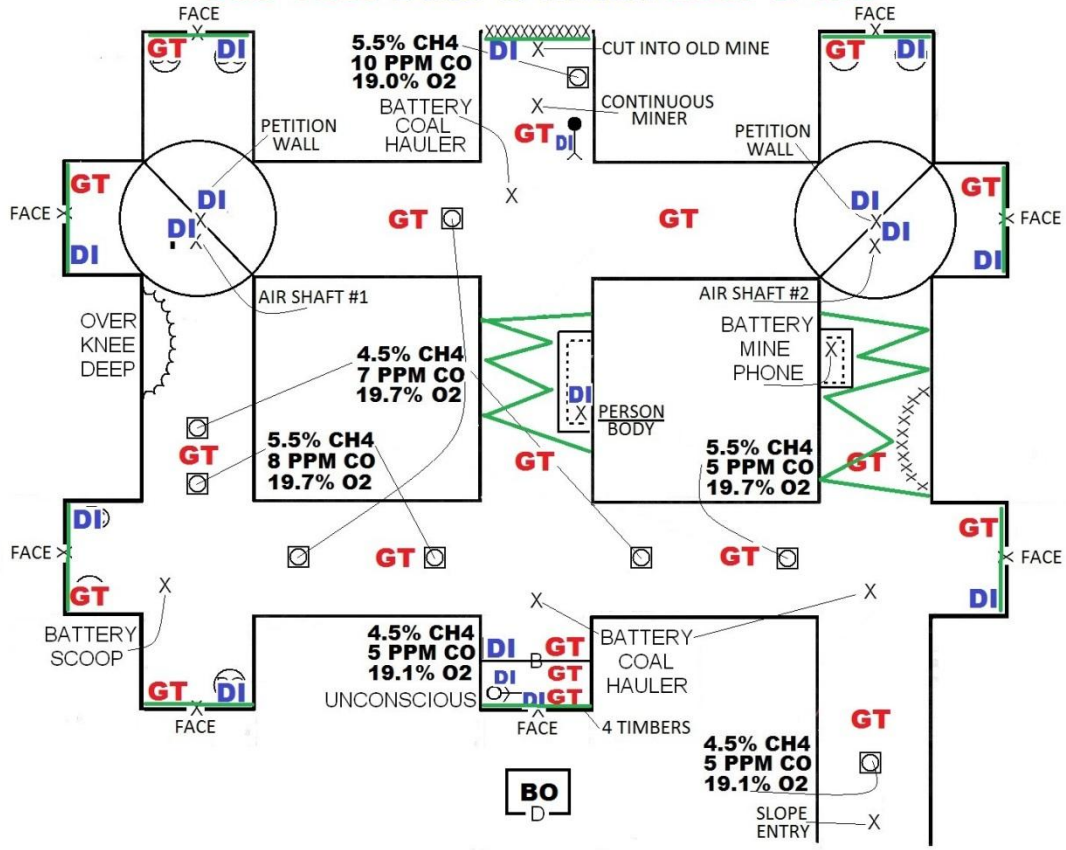
BO MAP



Team Stops

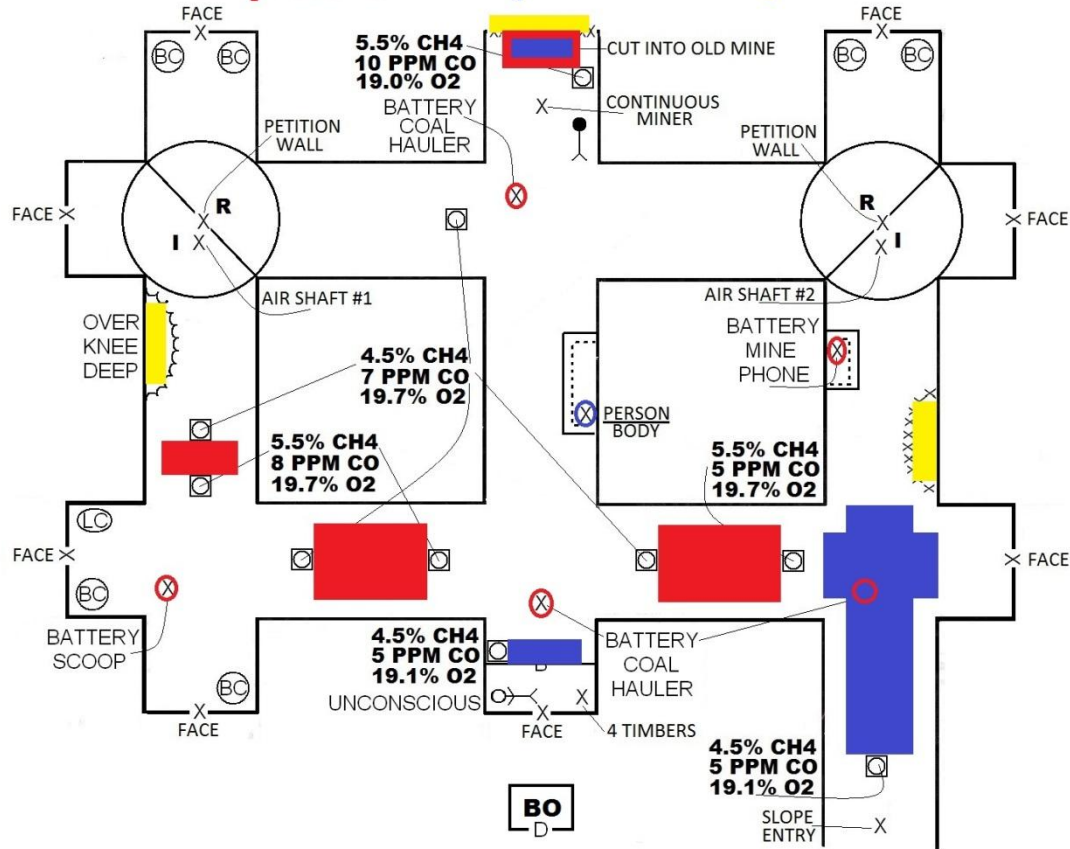


Gas Test Date & Initial Roof & Rib

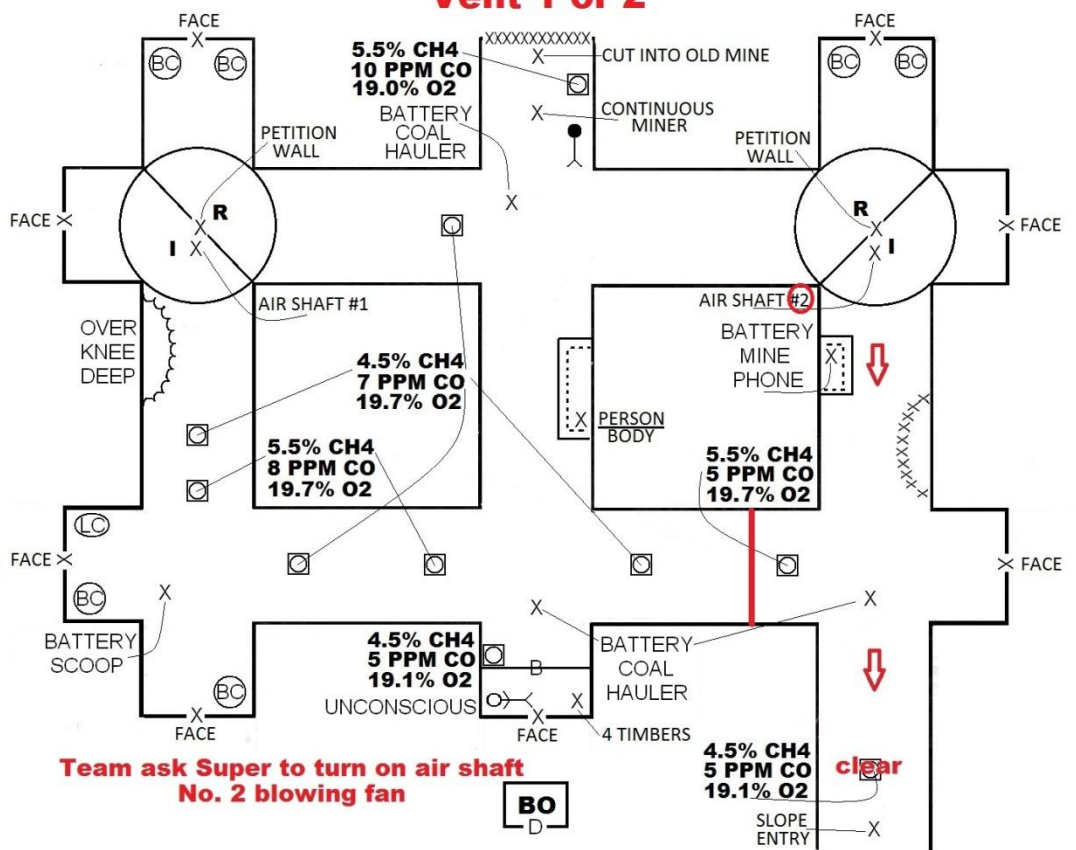


Gas Extents

Explosive **Irrespirable** **Unexplored**

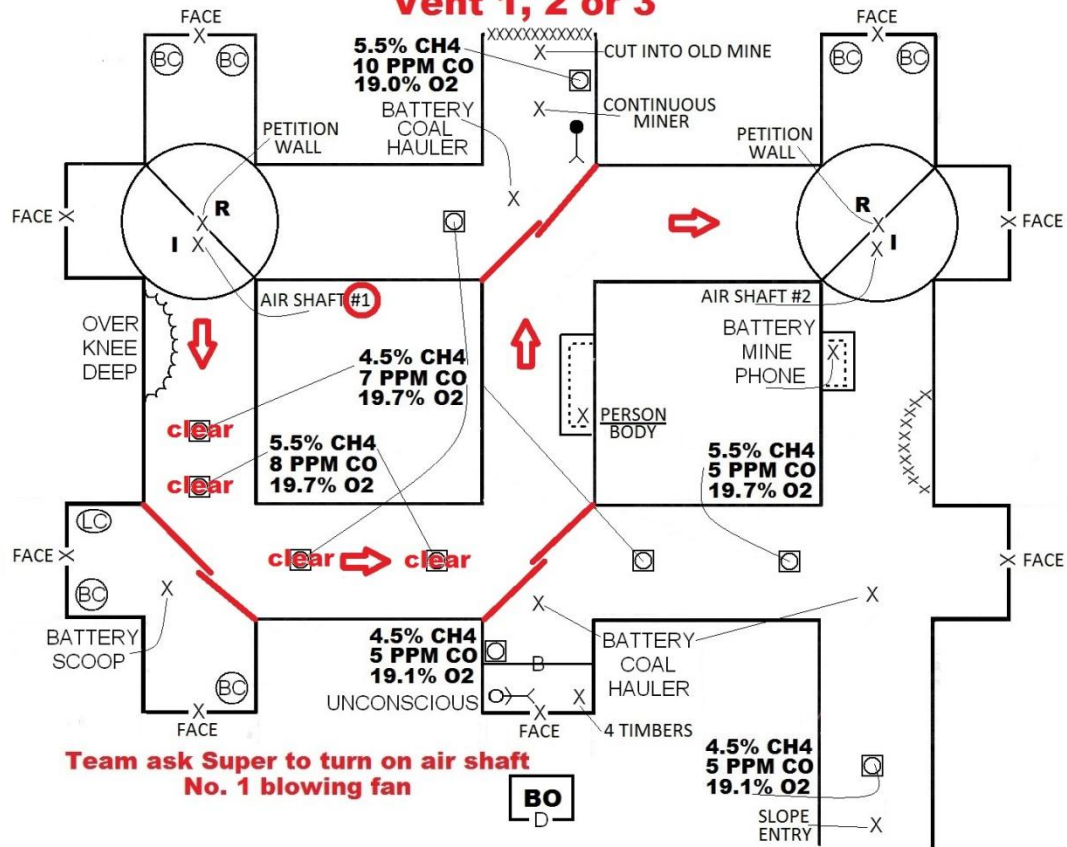


Vent 1 or 2



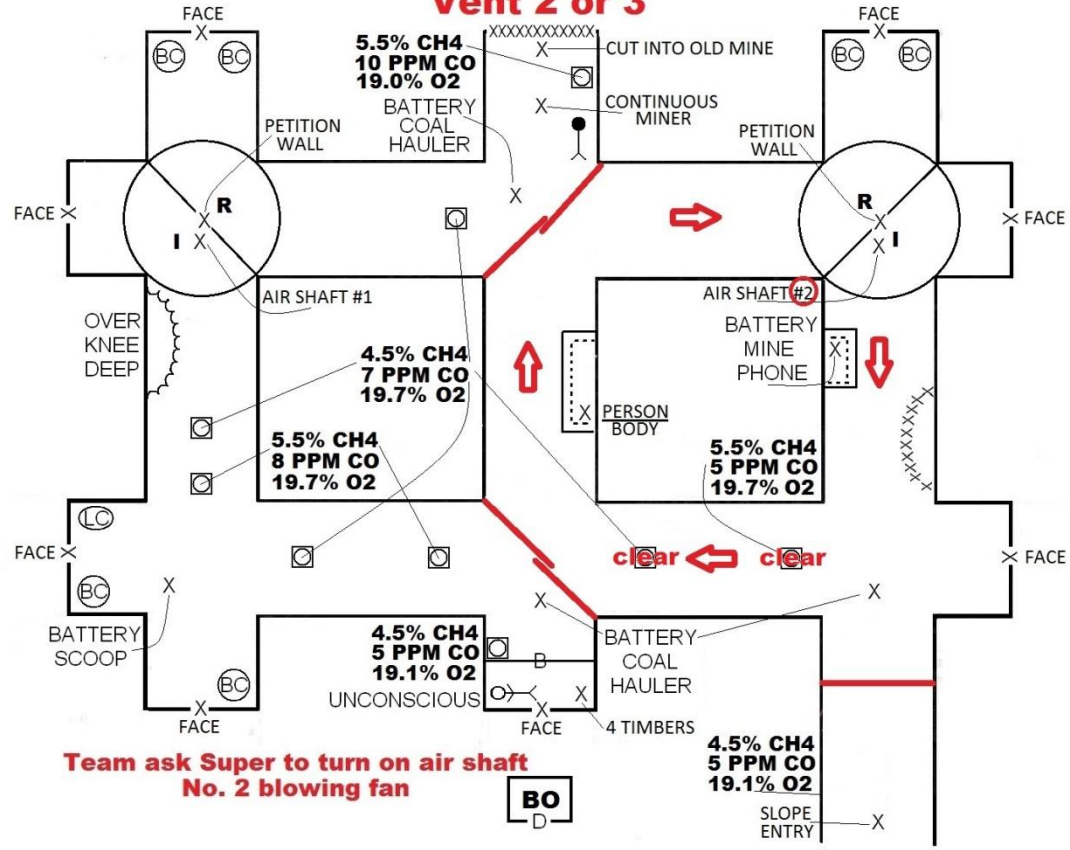
Team ask Super to turn on air shaft No. 2 blowing fan

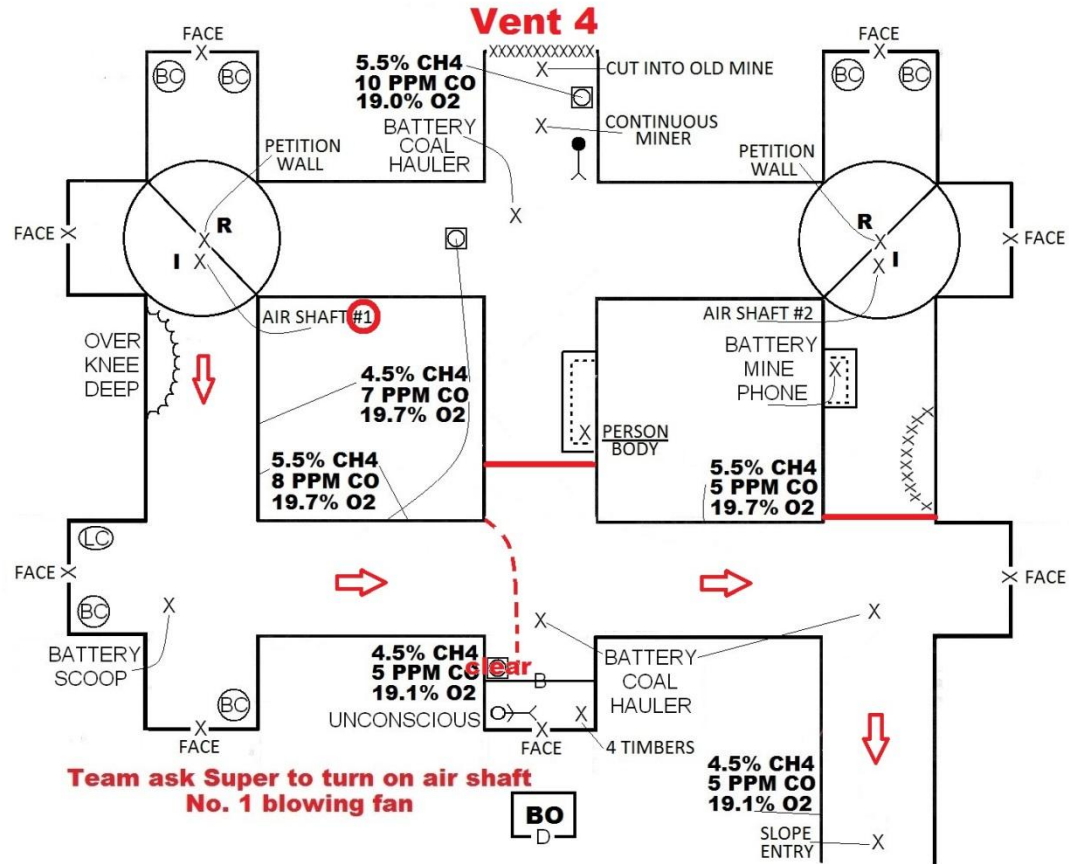
Vent 1, 2 or 3



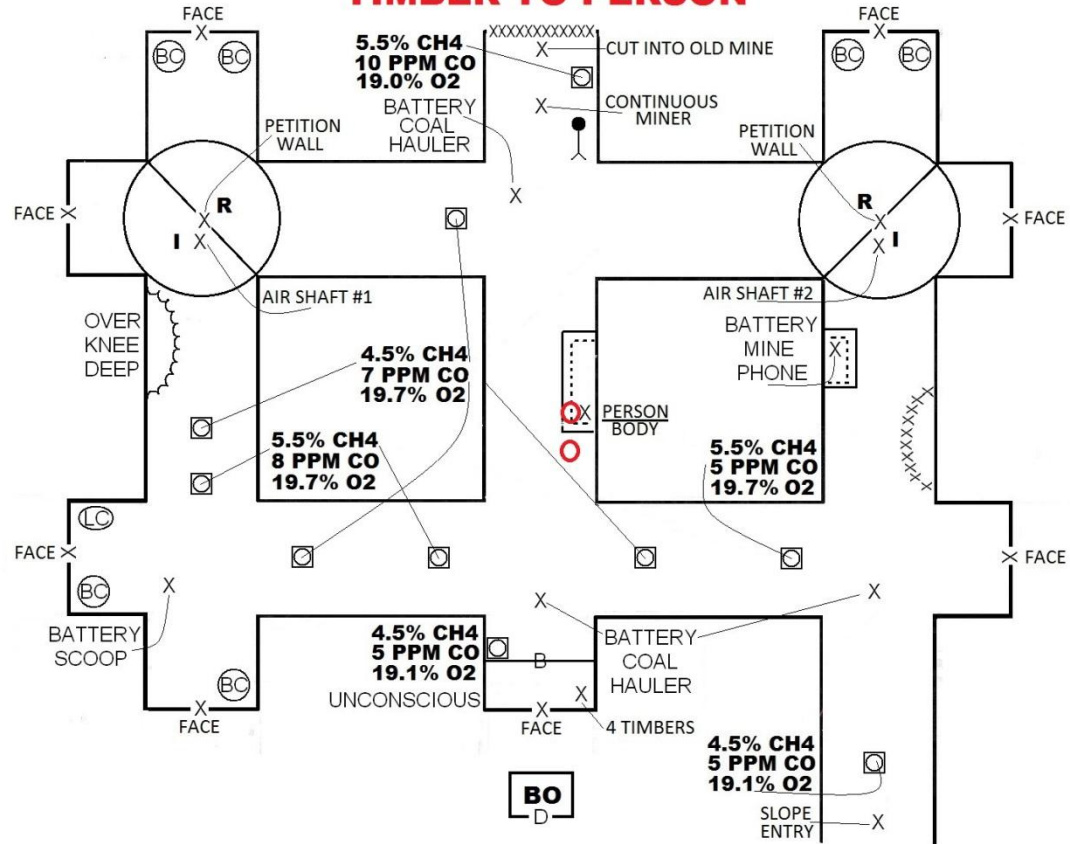
**Team ask Super to turn on air shaft
No. 1 blowing fan**

Vent 2 or 3





TIMBER TO PERSON



Keys to Problem

- **Team must enter the mine in the # 3 entry (Slope)**
- **Team must not let explosive mixtures flow over batteries, caved areas and water over knee deep**
- **Team must not let irrespirable atmospheres flow over person in unsafe roof or over caved and water over knee deep**
- **To ventilate correctly, team must remove explosive mixtures before ventilating the barricade to rescue patient**
- **Team must timber to person after taking live unconscious to FAB**