

## Statement

**Thank you for responding to our call for assistance, welcome to the Slow Drive #1 Mine.**

**This is a scoop and ram car haulage mine with water problems. We have two large sumps with one located in the #1 entry in the intersection of B crosscut and another one located in #3 entry in the intersection of A crosscut. We pump the water by means of air pumps through discharge lines to the surface that are located inside of a borehole. The compressor that supplies air to these pumps is located on the surface with an on/off switch located at the fresh air base. The air supply shut off valves for each pump are also located in the fresh air base so water can be pump at both sumps or just one sump and controlled by the briefing officer that is located there and both valves are open at this time. The mine is ventilated by an exhausting fan which is located on the surface. It is running and we do not want it shut off, reversed or stalled for any reason. The entries are numbered from left to right with #1 entry on the left. Ventilation has been established to the fresh air base with the #1 and #2 entries being intake and the #3 entry being return, and the maps that you will receive are up to date.**

**Three miners were working on the section and did not return to the surface at the end of their shift, and we have made several calls for them by radio, and we have not heard from them. The mine is walking height, supported by resin bolts, with gas accumulation and air problems.**

**Please watch your ventilation at all times.**

# **Instructions to the Team**

## **The Problem**

**The command center is located on the surface. The Briefing Officer will be underground in the Fresh Air Base.**

**The on/off switch for the air compressor is located in the Fresh Air Base the air compressor is not operational at this time you will be informed when it is operational.**

**The on/off valves that will control air to the two separate air pumps are located in the Fresh Air Base**

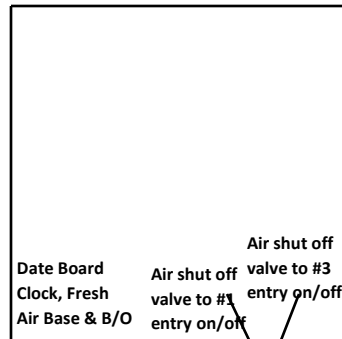
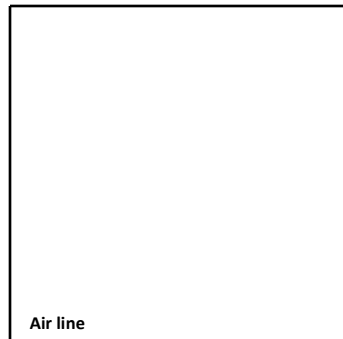
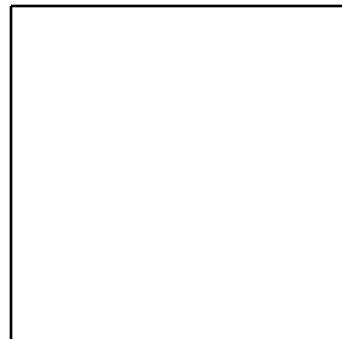
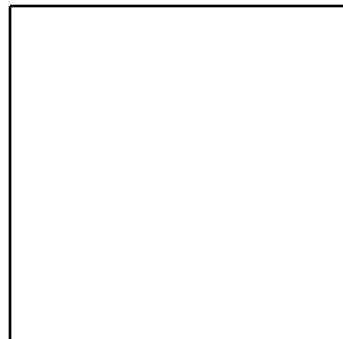
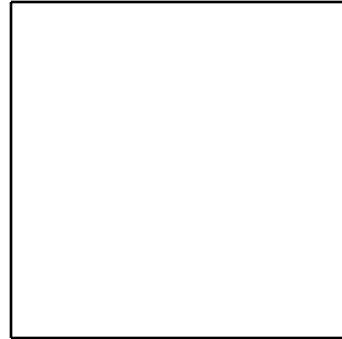
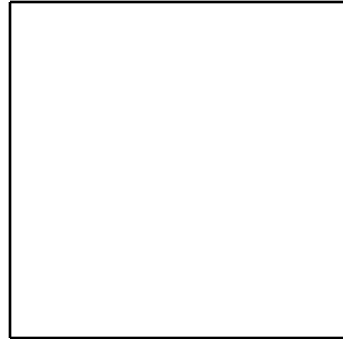
**Explore all areas of the mine that can be explored safely.**

**Please bring out any missing miners to the Fresh Air Base.**

**A previous Team established the fresh air base and reported to have built temporary stoppings across #1 and #2 entries to control air movement inby. However, we are not sure of the temporary stoppings exact locations.**

**Water may return after pumping.**

# Field Map

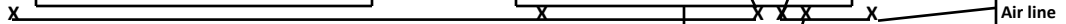


Air line

Date Board  
Clock, Fresh  
Air Base & B/O

Air shut off  
valve to #1  
entry on/off

Air shut off  
valve to #3  
entry on/off



Air line



**D**

Scale 1" = 10'

Temporary Stopping

Command Center on  
surface with the CCA .



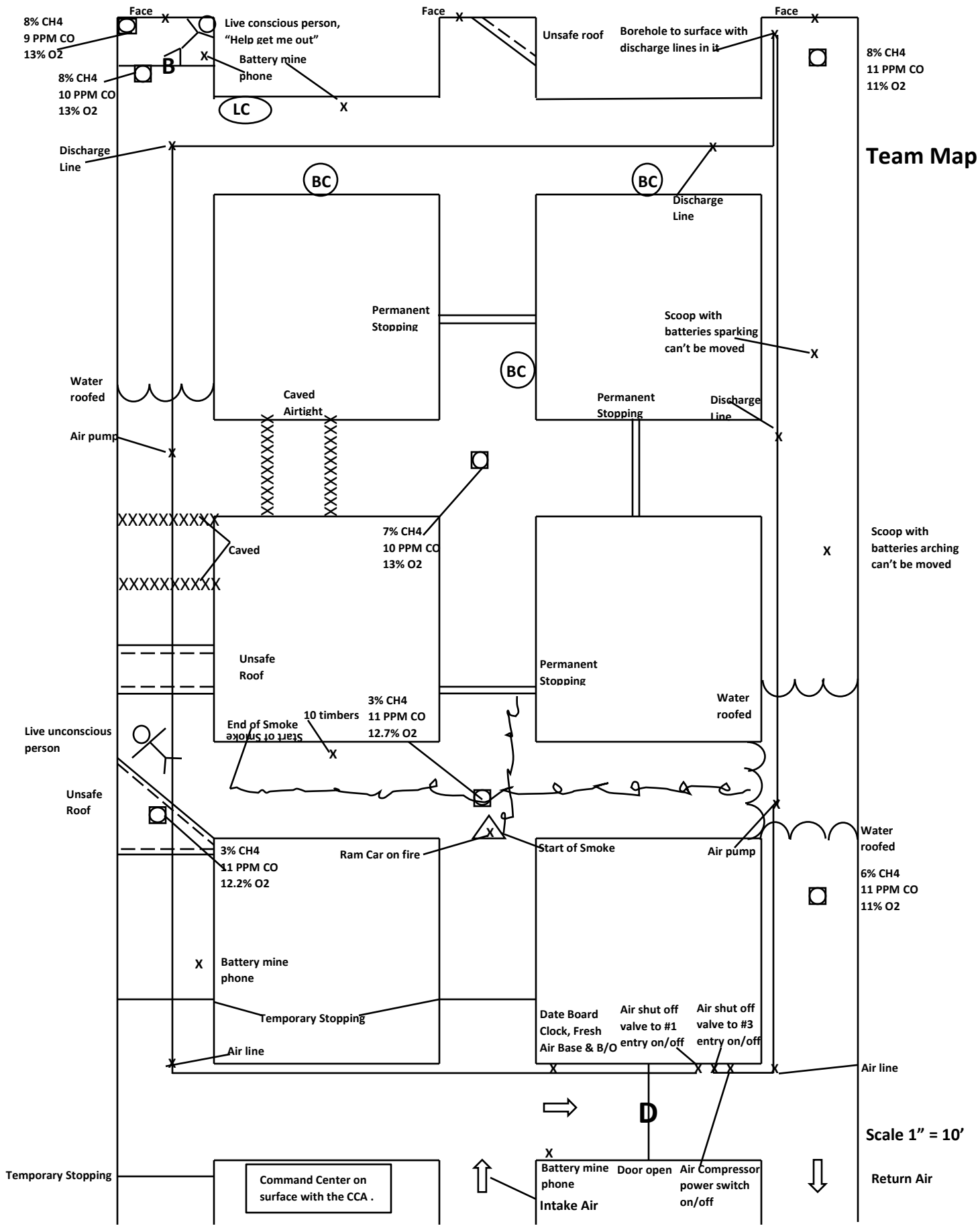
Battery mine  
phone  
Intake Air

Door open

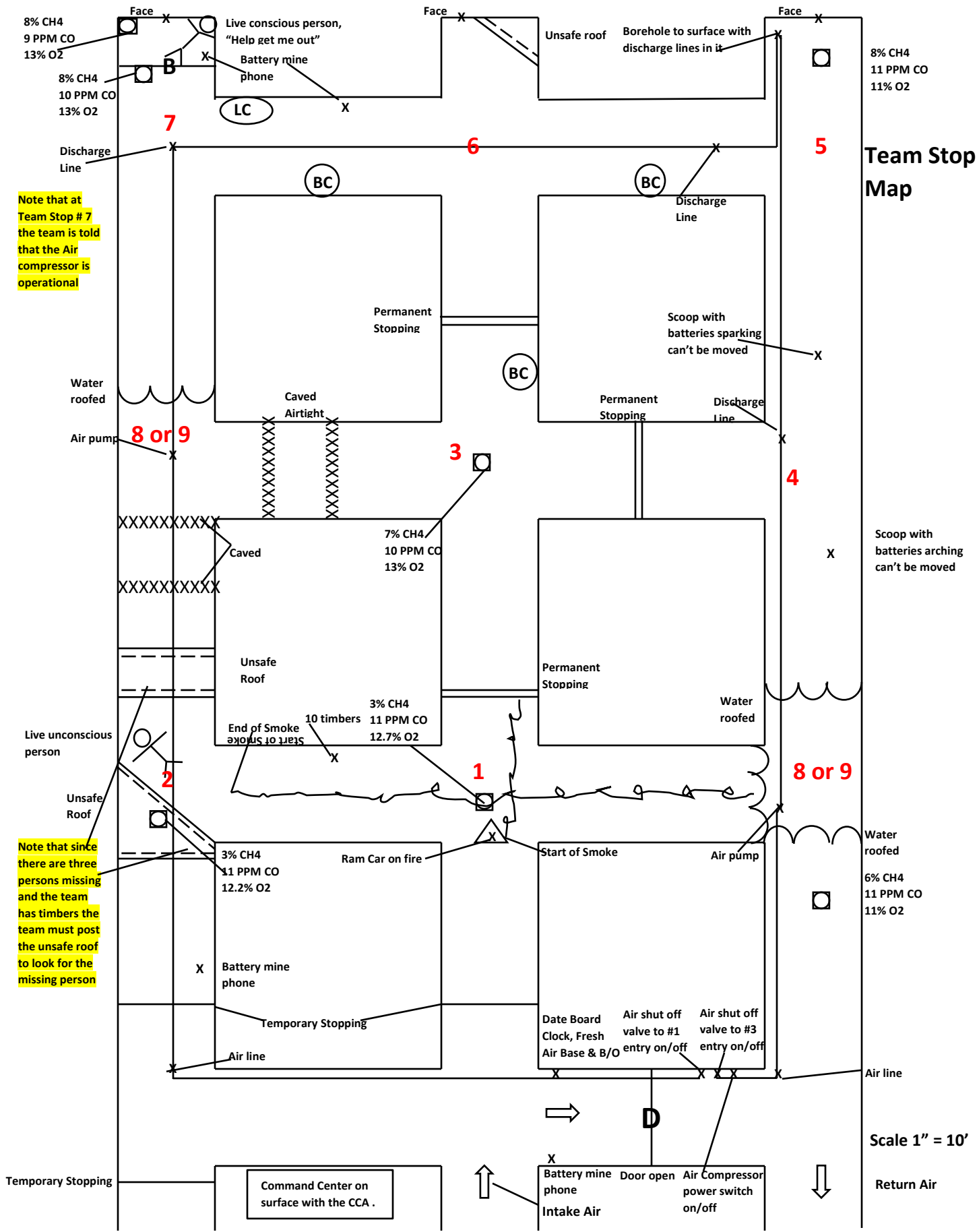
Air Compressor  
power switch  
on/off



Return Air

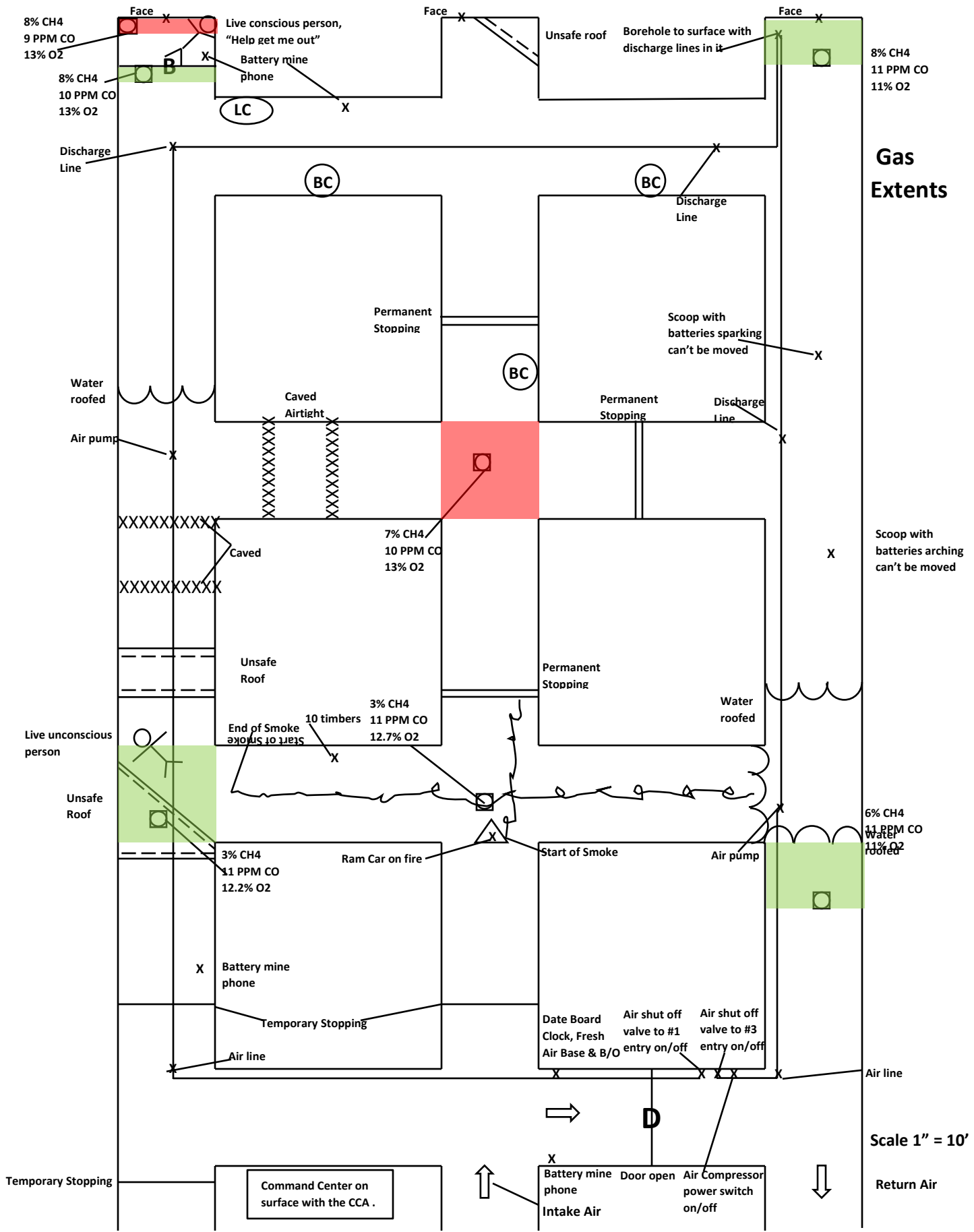


# Team Stop Map

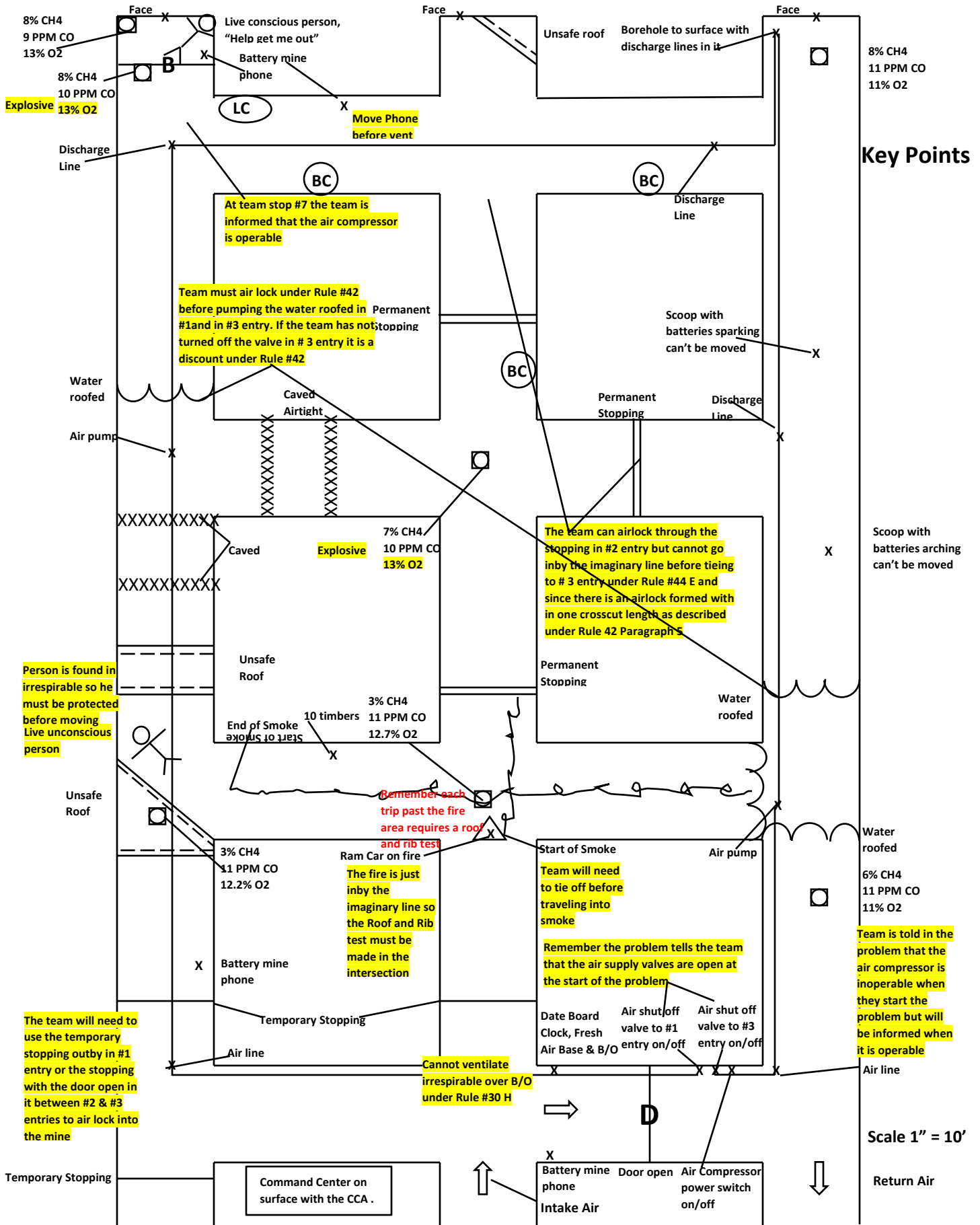


Note that at Team Stop # 7 the team is told that the Air compressor is operational

Note that since there are three persons missing and the team has timbers the team must post the unsafe roof to look for the missing person





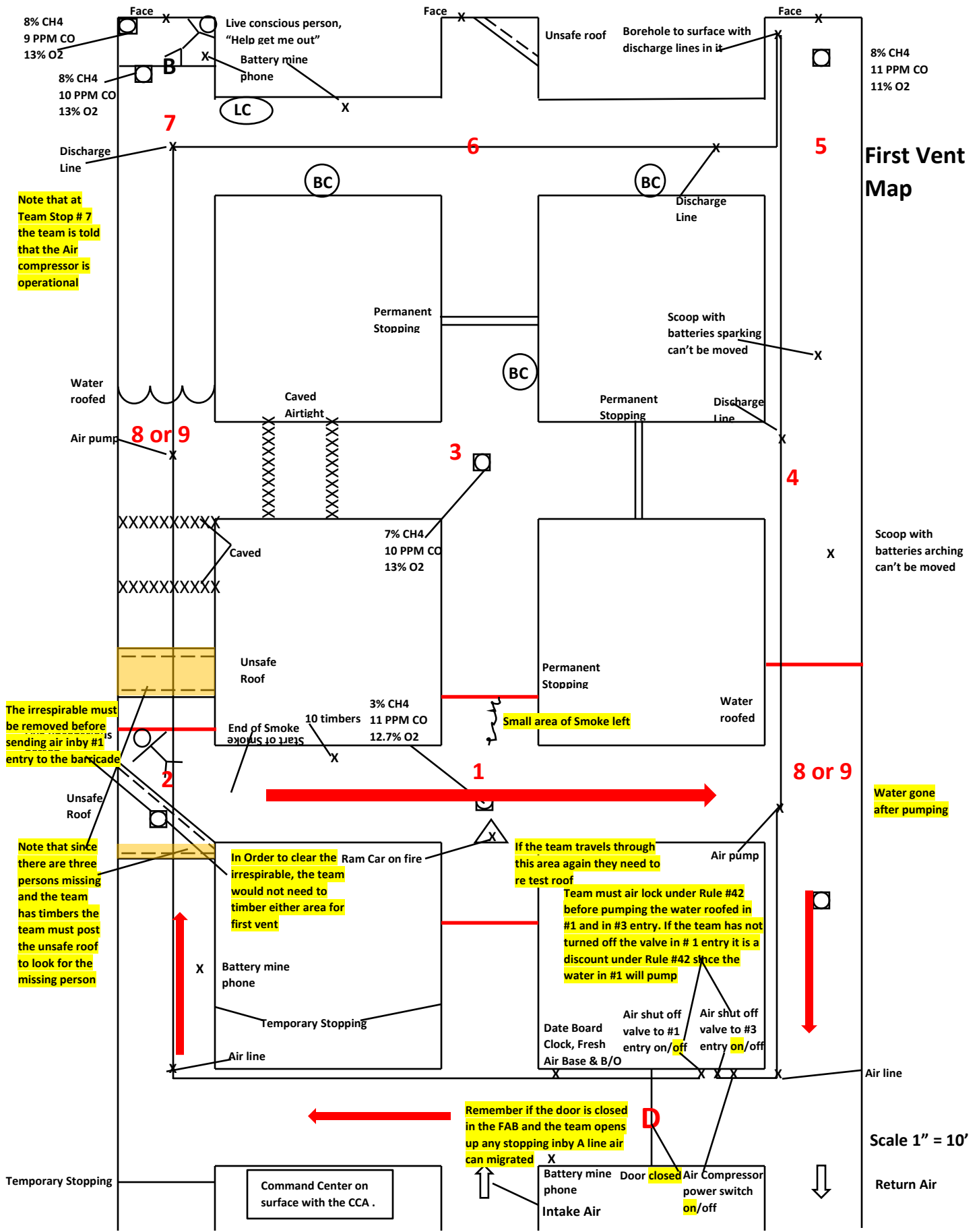


**Please give this to the team at team stop #7 when they recognize the  
barricade:**

**The air compressor located  
on the surface is now  
operable**

**Patient Statement for person behind the barricade in #1 entry:**

**“Help get me  
out”**



Note that at Team Stop # 7 the team is told that the Air compressor is operational

The irrespirable must be removed before sending air in by #1 entry to the barricade

Note that since there are three persons missing and the team has timbers the team must post the unsafe roof to look for the missing person

In Order to clear the irrespirable, the team would not need to timber either area for first vent

If the team travels through this area again they need to re test roof

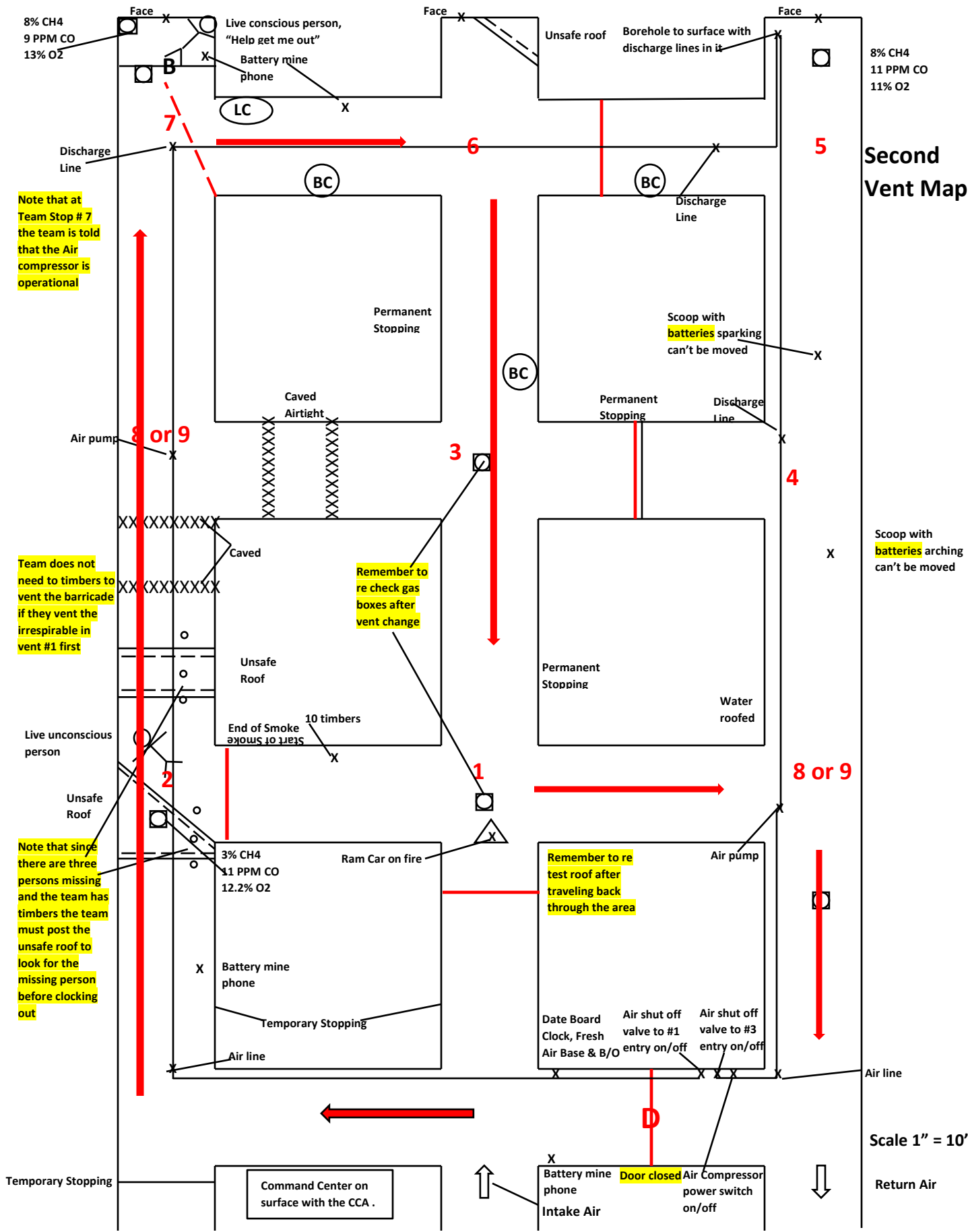
Team must air lock under Rule #42 before pumping the water roofed in #1 and in #3 entry. If the team has not turned off the valve in # 1 entry it is a discount under Rule #42 since the water in #1 will pump

Remember if the door is closed in the FAB and the team opens up any stopping in by A line air can migrated

# First Vent Map

Scale 1" = 10'

# Second Vent Map



Note that at Team Stop # 7 the team is told that the Air compressor is operational

Team does not need to timbers to vent the barricade if they vent the irrespirable in vent #1 first

Note that since there are three persons missing and the team has timbers the team must post the unsafe roof to look for the missing person before clocking out

Remember to re check gas boxes after vent change

Remember to re test roof after traveling back through the area

8% CH4  
11 PPM CO  
11% O2

Scoop with batteries arching can't be moved

Scale 1" = 10'

Return Air

## Judge's Instructions

1. Fresh Air Base procedures such as starting the clock, date, team number and initials, portal checks, receiving the packet and instructions, getting under oxygen, establishing communications must be completed.
2. The team will find entries #1 & #2 blocked by temporary stoppings that were mentioned in the instructions given to the team, and there is water roofed in #3 entry at the imaginary line of the intersection with an explosive air gas mixture that goes to the water roofed. The team will likely take the stopping with the door in it in the FAB or the stopping across #1 entry outby the intersection, (this stopping will just let intake air move into the FAB) and use it to air lock through the stoppings inby the FAB. If the team airlocks into the stopping in #1 entry, they will encounter unsafe roof from rib-to-rib outby of the imaginary line and air locking in #2 entry finds nothing. Remember that each time the temporary stopping is originally breached in #1 and #2 the captain must take the gas test under Rule #24D.
3. **Team Stop #1** will be in A line of #2 entry since #1 is blocked by unsafe roof and #3 is blocked by water roofed with no way to pump it. On the imaginary line of the intersection there is a start of smoke placard which requires the team to be tied off in air clear of smoke before traveling into the smoke under Rule #22 and Refer to Rule #28 if the team has stopped with the #5 in the mine. Just inby the imaginary line of the intersection there is a ram car on fire. The captain will need to perform a roof and rib test perpendicular to direction of travel and from imaginary rib line to imaginary rib line of the intersection per Rule 23 paragraph 9. If the captain calls for a Stop to perform this retest and the #5 man has entered the mine a Team Check must be performed before moving the team under Rule #28 paragraph 3. Reaching toward #3 entry in A line the team while still attached to the link line will find water roofed at the imaginary line of #3 entry. Reaching inby they find a permanent stopping and reaching toward #1 entry while still in smoke the find the end of smoke just before the intersection of A line in #1 entry.
4. **Team Stop #2** will be in A line of #1 entry where the captain as soon as he enters the intersection recognizes the unsafe diagonal unsafe roof in the intersection and has to perform a roof and rib zig zag test under Rule #23 paragraph 4. As the captain completes the roof and rib test the captain will encounter a live unconscious person which will require him to stop before passing the person touch that person by hand under Rule #32 and date and initial that person. He then can let another member of the team perform the assessment under Rule #12, place that unconscious person on the stretcher under Rule #11. The captain may continue to test the roof of the intersection and the inby unsafe roof across #1 entry at that stop. Remember that the team still might have one or

two members still in smoke and they will need to have hold of the link line and the #5 member will need to have hold of the smoke reel. Other team members that are in air clear of smoke can be off the link line at that stop but must have hold of the link line in air clear of smoke before exiting the smoke to travel out and **must retest the fire area on the back out**. The patient can now be taken to the FAB. At this time after re-entering the mine the team **must again retest the roof at the fire area** then the team should airlock and go up #2 entry to continue to explore. There are ten timbers found in A line and there is unsafe roof in # 1 entry they could use to timber through that area. The problem is that they still have two unaccounted for persons and this is a straight across area of unsafe roof so they do not know how many timbers it will take to post through it. Also, it is an inaccessible area under Rule 44 F that inaccessible need not be explored until all accessible areas have been explored first. Refer to Rule #32 paragraph #4 that mentions using timbers to post to bodies only after all missing persons are accounted for.

5. **Team Stop #3** will be in B line of #2 entry where the team has air locked through to get to this location. In the intersection the team has an explosive/irrespirable air gas mixture. Inby they find a permanent stopping across the entry, reaching toward #1 entry they find caved airtight across the crosscut. Reaching toward #3 entry they find a permanent stopping. The team may choose to air lock through the stopping in #2 but can only reach to the outby imaginary line of the intersection. They must under Rule 44 E tie to #3 entry since ventilation controls are provided for two break limit since they are blocked by inaccessible going to #1 entry. Also note that they already have an airlock formed under Rule #42 paragraph 4 since there are ventilation controls in place within one crosscut length.
6. **Team stop #4** should be in B line of #3 entry where they find the pump discharge line, outby they find a battery scoop with batteries sparking, (not a fire) and then the inby side of the water roofed and inby they find another battery scoop with batteries arching (not a fire).
7. **Team Stop #5** should be in C line of #3 entry where the team finds two discharge lines running inby. Then inby the intersection they find an irrespirable gas the borehole to the surface with the discharge lines in it and a face. Reaching toward #2 entry is just the discharge line.
8. **Team Stop #6** should be in C line of #2 entry where the team outby finds a permanent stopping, in the crosscut toward #1 entry they a brattice cloth build, a battery mine phone and a line curtain. Then reaching inby the intersection they find an area of Diagonal unsafe roof and a face.

- 9. Team Stop #7** will be in C line of #1 entry once the team has stopped give them the written statement from this packet the air compressor on the surface that supplies the air for the air pumps is now **operable**. Note there is still the air compressor on/off switch in the fresh air base that will need to be used to turn on the compressor. The team reaching inby the intersection will find an irrespirable then a barricade, (once the captain acknowledges the barricade have the patient read the written statement), "**Help get me out**". Outby the team will find water roofed across the entry with a discharge coming out of the water roofed and going through C line to #3 entry. In order to explore since they do not have means to ventilate yet they will need to pump the water they have found in #1 and #3 entries. Or they may choose to use the timbers to post up #1 entry through the unsafe roof. **To pump the water** the team should choose which area to pump first the water in #1 or the water in #3 entry. This will be controlled by the air valves located in the fresh air base and the B/O can turn them on and off for the team. If they choose to pump the water in #1 entry they have to **build an airlock prior to pumping** under Rule #42 paragraphs 2 & 5. Then request that the B/O turn off the air valve to #3 entry, since they are both on at the start of the problem, and then turn on the air compressor power switch that is in the fresh air base. **This will instantly pump the water in #1 entry** and the team should turn off the air compressor, but it does not have to be turned off. The team can now explore outby to B line in #1 entry. **If the team does not turn off the air valve to #3 entry that water will pump also and be gone, but if they have not built the two required airlocks as mentioned in Rule #42 paragraph 5 then the team should be docked for not doing that under Rule #42.**
- 10. Team Stop #8** should be in B line of #1 entry where they caved on the outby imaginary line of the intersection which means the captain is aware of the caved and must perform a zig zag roof and rib test in the entire intersection. In the crosscut toward #2 entry of B line the team will find a caved airtight across the crosscut. The team now knows that they have an unexplored area in #1 entry between A & B lines. As well as the unexplored area in #3 entry at A line.
- 11. Team Stop #9** can be in #3 entry of A line after the team airlocks on two of three sides of the three-way intersection per Rule #42 paragraph 5. Then they need to turn off the air valve to #1 entry and turn on the valve to #3 entry then turn on the air compressor, if it was turned off, to pump the water in #3 entry. After the water is removed then the team needs to remove the airlock stoppings and examine that area. This is so that area is not unexplored after removing the water so the team can safely ventilate through there. The team now can ventilate the barricade in #1 entry by sending air up #1 entry through the two unexplored areas in #1 inby and outby A line. The air that they will send is clear air, so they do not need to timber the unsafe roof areas at this time. They are tied to the response from the barricade under Rule 41 C they have continued to explore and now

have means to ventilate. See the ventilation map #1 this ventilation will clear the irrespirable in the intersection of #1 entry of A line and the smoke in A line over to #3 entry. Remember that since the door will be closed in the stopping between #2 & #3 entries in the FAB that will direct air inby so not only will the team need to have inby areas sealed against air migration they must be very careful of air locking to set up ventilation #2. Also, the B/O can open and close that door or if the stopping needs built, he can do that also if the captain has previously checked the roof and rib for that build.

12. The next move will be to set up ventilation for Vent #2 that will send air inby to the barricade to remove the irrespirable/explosive gas there as required under Rule #35. Note that the team will need to **move the battery mine phone before sweeping** the explosive/irrespirable gas from in front of the barricade. See ventilation map #2 and note that there are two battery scoops that cannot be vented over in #3 entry. Before breaching the barricade after the team has vented away the gas the team will under Rule #42. Then inside the barricade they will find a conscious live man that does not need to be protected by apparatus, Carevent or SCSR due to the small area of smoke being removed by the second ventilation. Now that that person is outside there is still one person missing and the team has two areas of unexplored unsafe roof in #1 entry inby and outby A line. Yes they might have set some of the timbers but if they have not under Rule #32 they will need to timber those areas to look for that person. The outby area of unsafe roof is in #1 entry about  $\frac{3}{4}$  the way up with from the FAB to the unsafe roof across the entry and up to the outby side of the imaginary line of the intersection. The team will not find a third person and since all other inaccessible areas have been explored to all sides the team may now return to the FAB and clock out.

Remember that with multiple moves for ventilation and taking person out the fire area in #2 entry will need the roof test before any team member passes it and the gas boxes in #2 will need re-tested.