

2018 TRI-STATE

POST 6

DAY 2 MINE

RESCUE

CONTEST

STATEMENT

Hello my name is _____ I am the responsible person for this mine and I am going to explain the situation to you as we know it.

This is a new mine with three slopes going down from the surface to the coal seam. These entries are numbered from left to right with # 1 entry on the left and # 3 entry on the right. There is a blowing fan located at the top of slope in the # 3 entry which is currently off, but can be turned on from a switch located in the command center on the surface.

The intake air, once the fan is turned on, will travel up the # 3 entry to the faces and over to the # 1 entry and then back out the # 1 entry to the surface.

Our mining plan was to mine in from the slope bottom a few hundred feet then turn toward the # 1 entry away from an abandoned mine that is near there. However, we believe something went very wrong since the three man set up crew called out early this morning and said that they had mined into old works in the # 1 entry. They reported low oxygen and water coming in from the old works and this was the last that I heard from them. So I called for help and you are the first team ready to go in. We have all agencies on site and a trained, well equipped mine rescue team to be your back up while your team is in the mine. We have adverse roof condition and methane gas has been a problem. The mine is walking height with resin roof bolts for roof control.

Good Luck

PROBLEM
INSTRUCTIONS TO THE TEAM

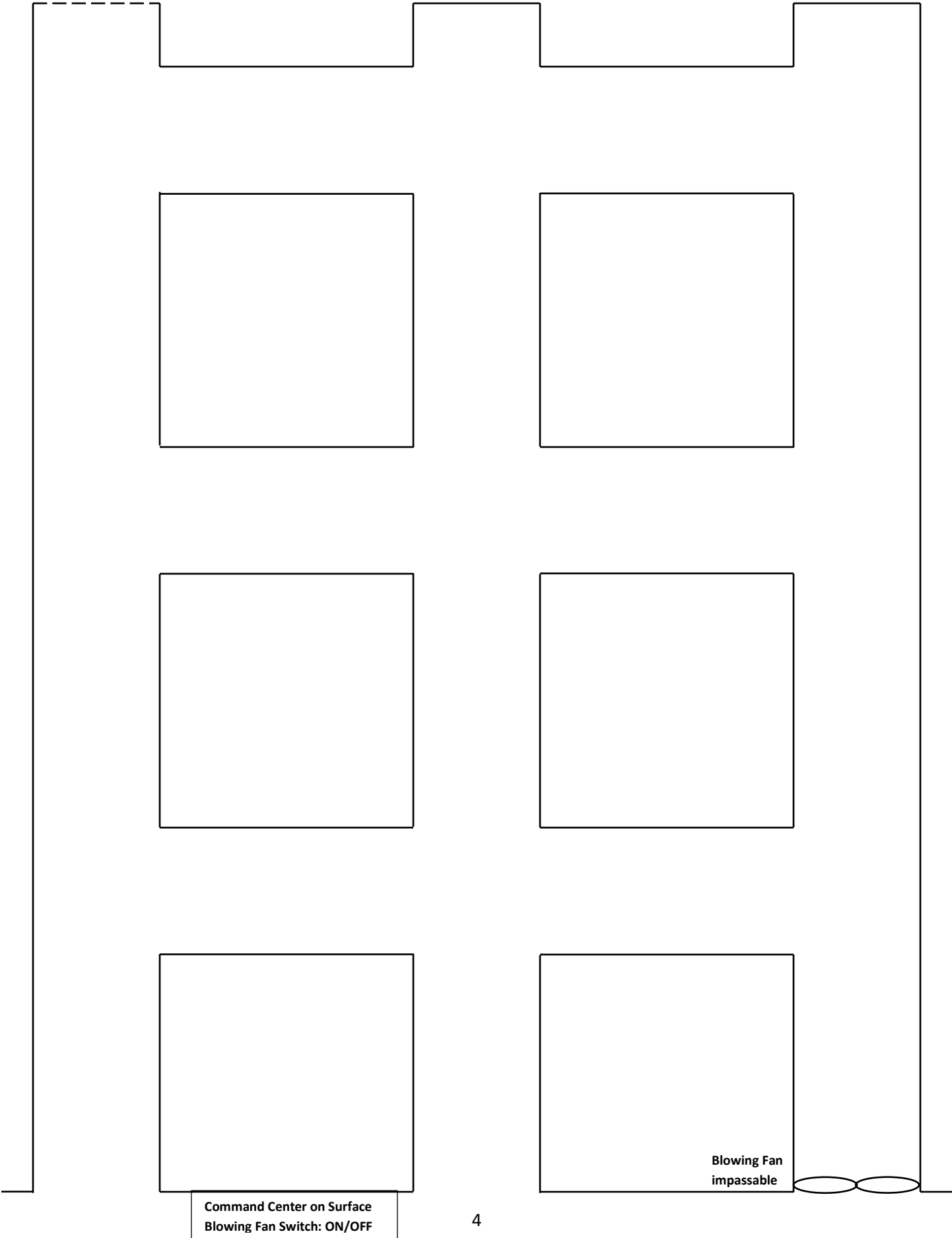
**THE FAN CAN BE TURNED ON OR OFF FROM A SWITCH
LOCATED IN THE COMMAND CENTER BY THE TEAM'S
REQUEST GIVEN TO THE SUPERINTENDENT ON THE
SURFACE VERBALLY BY THE TEAM**

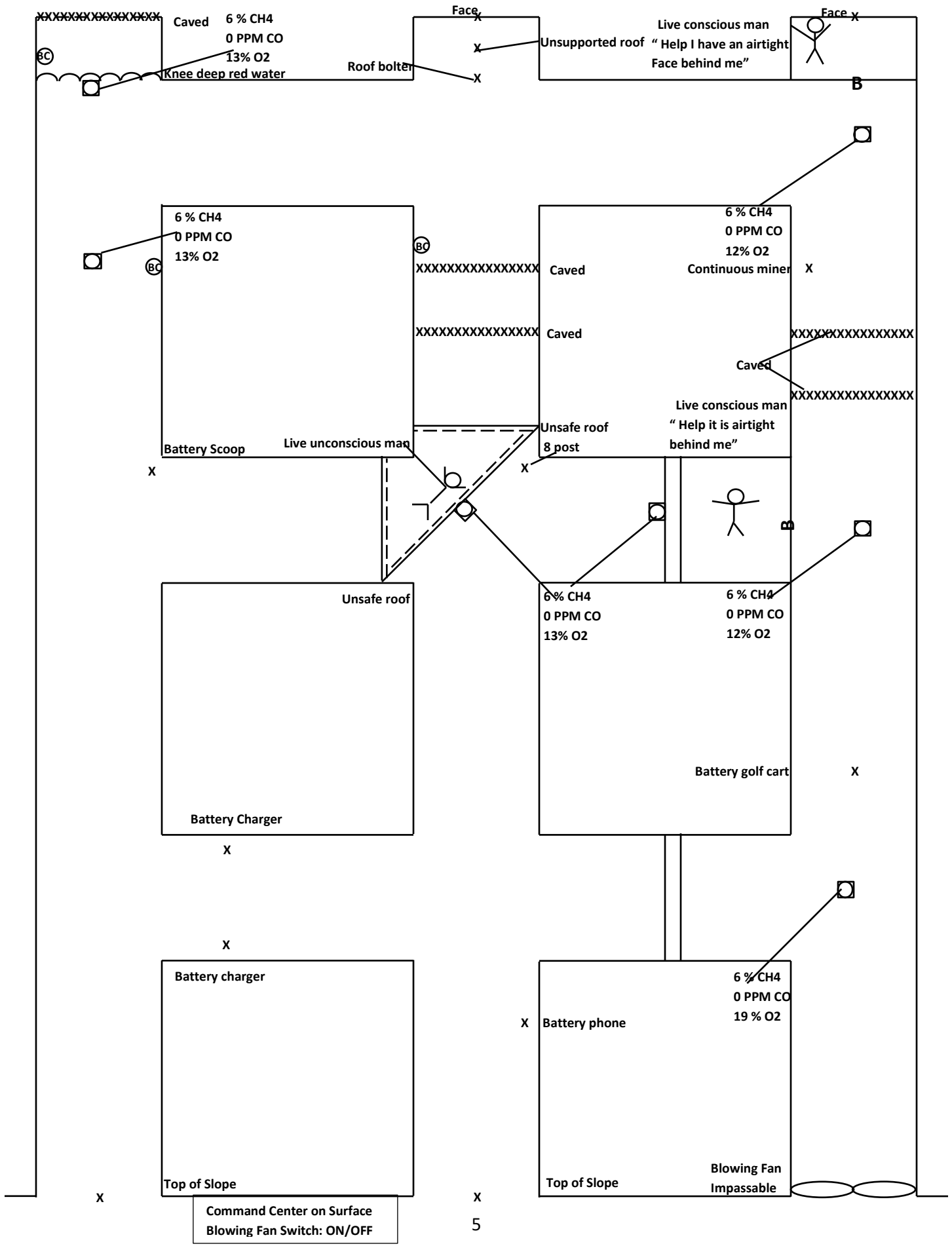
THE FAN CAN ONLY RUN IN BLOWING MODE

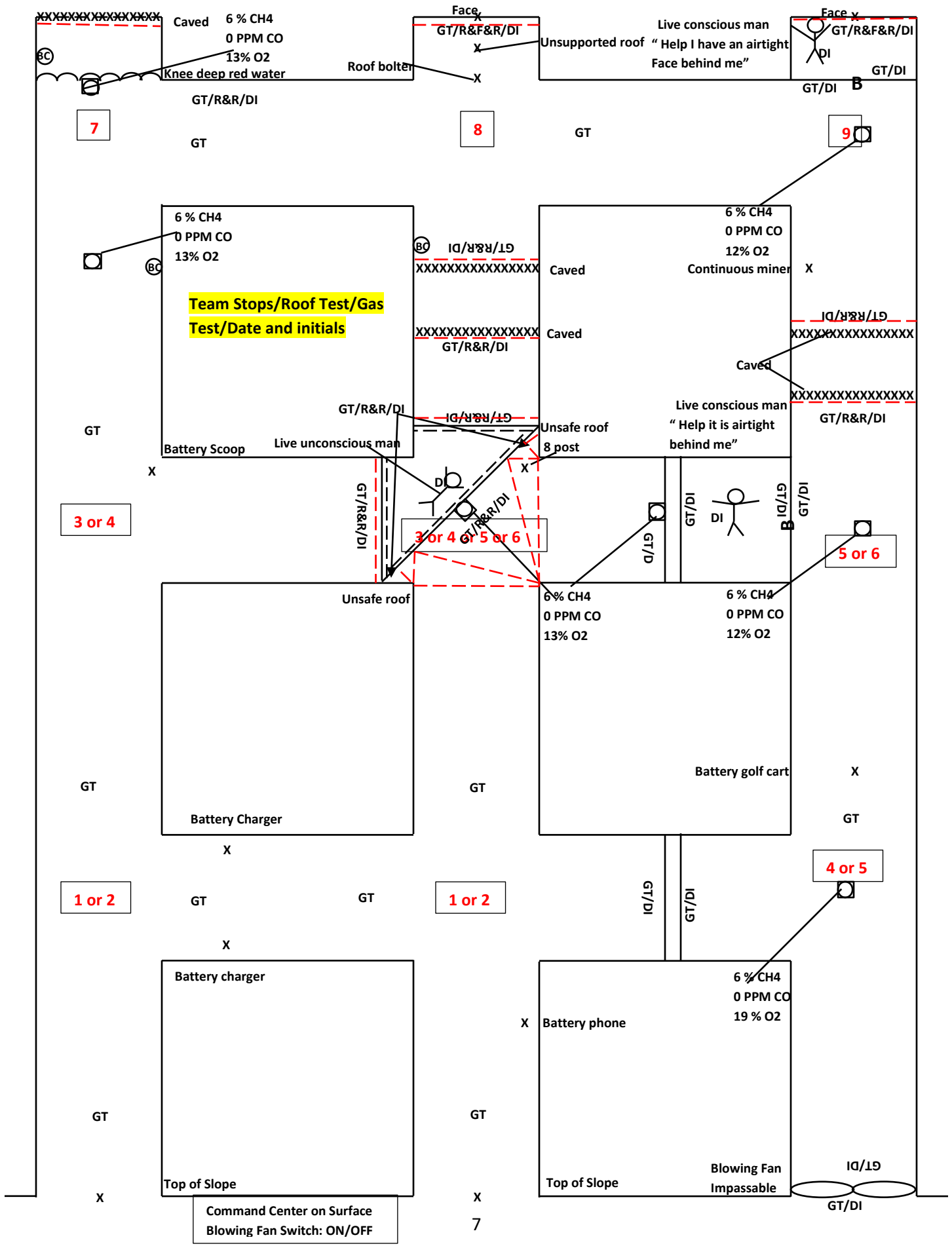
THE MAPS ARE NOT UP TO DATE

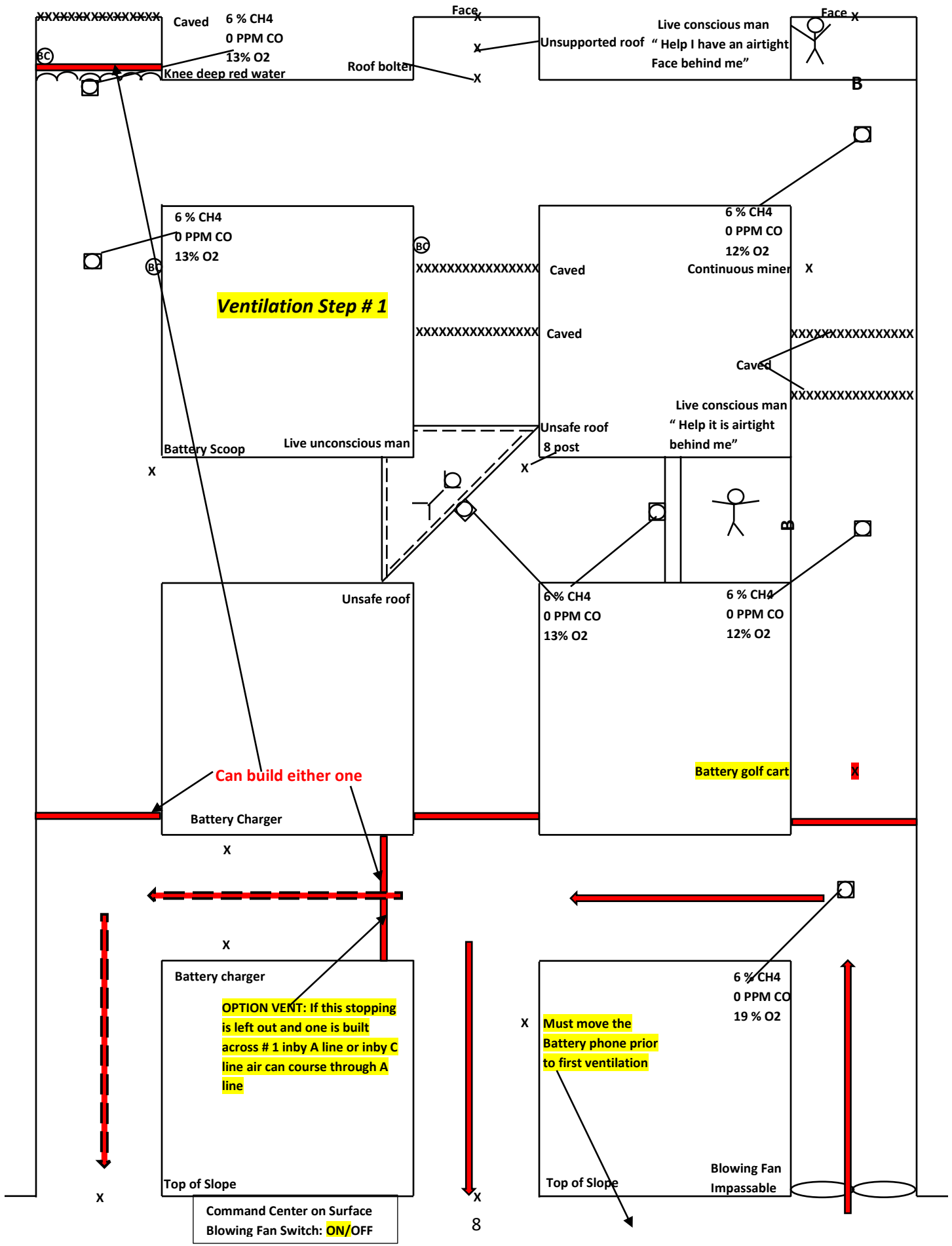
**EXPLORE ALL AREAS OF THE MINE THAT CAN BE
EXPLORED SAFELY**

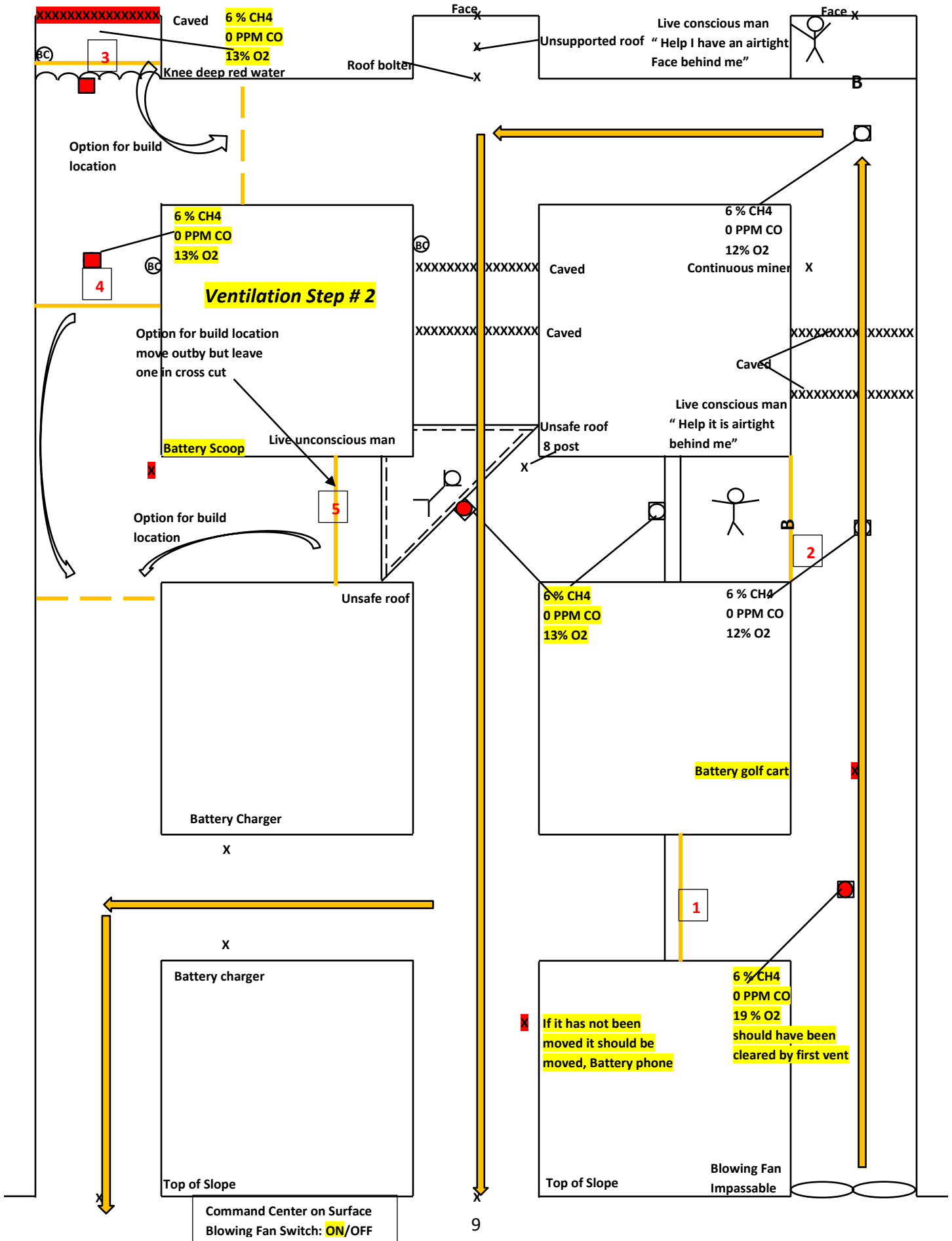
**YOU WILL HAVE A 65 MINUTE TIME LIMIT TO COMPLETE
THE PROBLEM AND RECEIVE A 10 MINUTE WARNING
BEFORE THE END OF WORKING TIME**



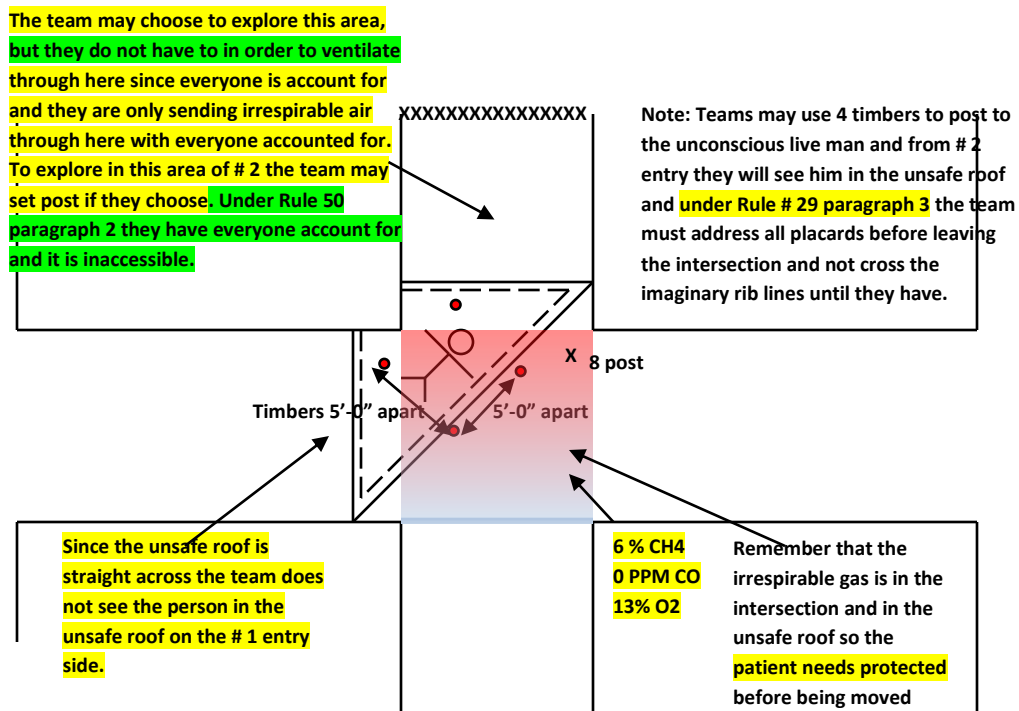




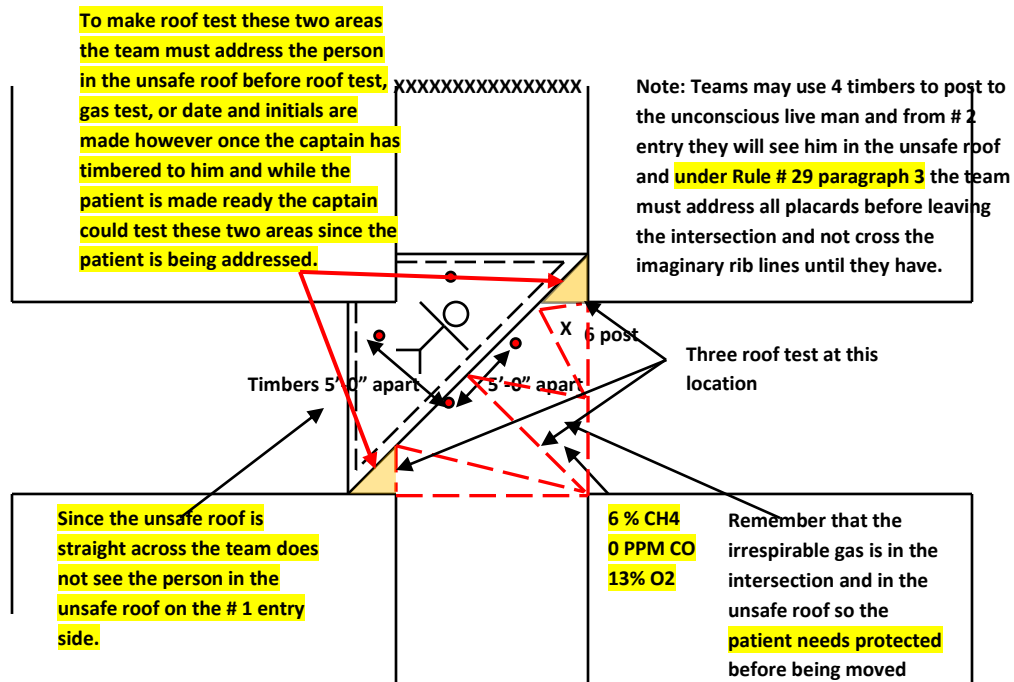




Timbering and addressing the intersection in # 2 entry of B line



Timbering, roof and rib test, gas test, and addressing the placards in the intersection in # 2 entry of B line



Judges Instructions

The team is located on the surface and will need to make portal checks at all three openings to the mine under Rule 24 C. The team must make their reaches in # 1 and # 2 entries since # 3 entry is blocked by the fan.

Team Stop # 1 *can be in either # 1 or # 2 entry of A Line. If the team chooses # 1 entry of A Line, the team finds nothing inby and two battery chargers in the open cross cut toward # 2 entry this will make TEAM Stop # 2 in # 2 entry under Rule 44 D.*

Team # 1 can be in # 2 entry of A line where the team finds nothing inby in # 2 and a permanent stopping in the cross cut toward # 3 entry.

Team Stop # 2 *will be in either # 1 or # 2 entry of A line as described above just depending on which one was Team Stop # 1.*

Team Stop # 3 *can be in either # 1 entry of B line or # 2 entry of B line. If it is # 1 entry of B Line, the team will find in the intersection a battery scoop. They will find a brattice cloth build inby the intersection and in the cross cut toward # 2 entry they will they will find about three feet from the end of the cross cut unsafe roof perpendicular across the cross cut and since it is straight across the cross cut they do not see the person under the unsafe roof, and as such are not tied to that person yet.*

Also at this team stop in # 1 entry the team has found a brattice cloth build which can be used in # 2 entry in A line to build through the permanent stopping there toward # 3 entry. This can change where team stop # 4 or #5 will be depending on when the team builds through the stopping.

If Team Stop # 3 *is in # 2 entry of B Line, the team encounters as they enter the intersection unsafe roof diagonally across the intersection extending inby the imaginary rib lines of the intersection both inby in # 2 and in the cross cut toward # 1 entry of A line. Under Rule 23 paragraph #4 in an intersection placards related to roof conditions on the imaginary rib lines must have a sound and vibration made by the captain prior to any team member leaving the intersection. This means that a zig zag roof test must be made by the captain before any imaginary lines are crossed. Since there are two areas, one area inby and one area in the cross cut toward # 1 that are pass the imaginary rib lines they will both need roof and ribs test made separately after the intersection test is complete. However, under Rule #29 paragraph 3 if there are placards in an intersection that need addressed prior to any team member breaking the imaginary rib lines of the intersection which is in this case the live person. So this means that before the two small triangular areas have roof and rib test, gas test, or date and initials the person under the unsafe roof, which is known by the captain entering the intersection all*

conditions are known and his presence traveled by the person. The unconscious person must be addressed since there is material to address him found in the intersection (timbers). Once the Captain timbers to this person he then can let the other team members assess, load, and protect the patient from the irrespirable atmosphere that he is in and move the patient out of the unsafe roof (under Rule 34 he must be protected by an approved breathing apparatus prior to being moved from that location). The captain could then while they are doing this could make the required test in those triangular areas. The team then can take the person out to the surface and return the complete their required reach toward # 3 entry in the crosscut under Rule # 29 paragraph 5. In the cross cut the team will encounter an irrespirable/explosive air gas mixture then an airtight separation, a permanent stopping, from behind there is a person saying "Help it is airtight behind me". Judges please have the patient start saying this as soon as the captain gets to the permanent stopping. Under Rule 35 paragraph 3 if there is a response from behind an airtight separation the irrespirable must be removed prior to breaching the airtight separation. Since the team does not have the means to ventilate yet they must continue to explore. The team should have enough material, timbers to post inby the unsafe roof in # 2 entry and can if they choose post through while they are there, but only after they have remove the patient. They may also decide to explore elsewhere and not timber through this area since they are blocked they can do that also. Please note that as the problem advances this area may not even need to be explored.

Team Stop # 4 can be in either # 1 or # 2 entry of B Line depending on where Team Stop # 3 was and they are described above under options for Team Stop # 3 on what is required in those intersections.

Another option for **Team Stop # 4** is if the team made # 1 entry of B Line and now has the brattice cloth build they may elect to air lock through the permanent stopping in A Line to go to # 3 entry remember that the captain must take the gas test when they breach the stopping. If they do this, they will find an explosive/irrespirable air gas mixture in the intersection only in # 3 entry. Taking their reach outby they will find the inby side of the blowing fan requiring a date and initial and gas test. Taking their reach inby they will encounter a battery golf cart 5'-0" inby in # 3 entry.

Team Stop # 5 can be in either A Line in # 3 entry as described above in the second option for Team Stop # 4 or in B Line in # 3 entry depending on where Team Stop # 4 was made.

If **Team Stop # 5** is in B Line of # 3 entry there the team will find an irrespirable/non-explosive air gas mixture. Judges please have the patient yell out his statement " Help it is airtight behind me", as soon as the captain enters the intersection. Toward # 2 entry there on the imaginary rib line there is a barricade from behind which there is a response and since there is an irrespirable there in the intersection the irrespirable must be remove before breaching the barricade under Rule # 35. Inby the intersection the team finds caved blocking the entry so after

roof and rib test, gas test, and date and initials at the caved and the barricade the team must retreat to continue to explore.

Team Stop # 6 should be in # 3 entry of B Line as described above for the second option of Team Stop # 5. However, it could be as an option depending on other team stops in # 2 entry of B Line. Both of these options have been described above in Team Stop # 3 second option.

Team Stop # 7 will be in C Line of # 1 entry where the team making their reach toward # 2 entry will find nothing. Taking their reach inby in # 2 entry there is an explosive/irrespirable air gas mixture at the water knee deep across the entry then a brattice cloth build and a caved area across the entry. The gas is not touching the caved area so it does not extend into the caved, but a gas test, date and initial and a roof and rib test will be required at the caved.

Team Stop # 8 will be in # 2 entry of C line where the team will find making their reach outby a brattice cloth build then a caved across the entry. In the cross cut toward # 3 entry they will not find anything. Inby the intersection the team finds a roof bolter and a placard that says unsupported roof this is not an unsafe condition by definition and the team may advance inby there where they find a face which will require a roof, face and rib test, a date and initial test, and a gas test.

Team Stop # 9 will be in C Line in # 3 entry there the team finds an irrespirable/non-explosive air gas mixture in the entire intersection only. **Judges please have the patient start yelling out his statement as soon as the team enters the intersection, "Help I have an airtight face behind me"**. Since the irrespirable is in the intersection and the team then finds a barricade on the imaginary line of the intersection the irrespirable must be vented away before breaching the barricade under Rule # 35. Now that a response from the barricade has been given all missing persons are accounted for, and that will allow irrespirable/non-explosive air gas mixture to be sent through unexplored areas. Outby the intersection the team will find a continuous miner and a caved across the entry.

Now the team will need to ventilated so please refer to the ventilation drawings on page no. 7 and 8 this will be a two-part ventilation.

Step one will clear the explosive/irrespirable air gas mixture in A Line of # 3 entry so it does not go over the battery golf cart in # 3 entry inby A Line. **The team must re-locate the battery phone located between the Surface and A Line in # 2 entry before they vent the gas over it.**

Step two will then allow the irrespirable/non explosive gas mixture in # 3 to be vented out from in front of the barricade in # 3 entry through the caved area in # 3 entry and through the intersection in C Line of # 3 entry at the second barricade. Since both barricades are on the imaginary rib lines of the intersections no line curtain is needed to sweep gas away, and there is no line curtain in the problem.

Air must be blocked from entering the old works in # 1 entry above C Line and from coming down from # 2 entry of C Line to # 2 entry of B Line and through the cross cut to # 1 entry in B Line since there is an explosive air gas mixture in the intersection of B Line of # 2 entry and it could pass over the battery scoop located in the intersection of # 1 entry of B line. There is an explosive air gas mixture in # 1 entry from C line outby in # 1 entry that must be blocked from moving over the scoop battery in # 1 entry. See the Step two ventilation for details.

Once properly ventilated the team may choose which barricade to take the person out of, they will not need to airlock into either one to get to that person since the response from both barricades said it was air tight.

Once inside either barricade the appropriate roof test/gas test/ and date and initials will be required along with the captain's touch by hand under Rule 32, and a date and initial at each live person. The assessment must be made on both patients also Rule # 12.

Please remember that upon re-entry to barricade areas they will need a re-test of all gas placards in areas that they ventilated over under Rule 24 F and since they more than likely shut the fan off to breach stoppings that were built this might have an effect on gas test also depending on where they are at when a fan is shut off.