

Ohio Valley Tri-State Post # 6
Day 2 Mine Rescue Contest
June 15,2017



Statement

Thanks for responding to our call for help. This is the Pen No. 2 Mine where we had a three-man crew who went into the mine at 12:00 a.m. and who did not return to the surface as of 8:00 a.m. today. You are the first team to respond to our problem and there is a backup team ready to serve you while you are underground. The fan was not running when the mine foreman arrived at the mine today. He tried to contact the three-man crew and got no response. The responsible person on the surface stated that he did not hear from the crew but that was not unusual for the midnight crew. He also did not know why the fan was not running. The power to the fan was checked and has been found to be operable if required. We started into the mine to check on the crew and we ran into an elevated levels of methane and without the fan running we didn't want to endanger anyone so we called on the mine rescue teams to help. This is a three entry mine with the air shaft located in the # 3 entry to the south of the slope bottom that we only run on the day shift, and the three-man crew is a set up crew for the production crew. The mine has a history of methane and bad roof and we only run this small mine when additional coal is needed for our contract.

The fan is a blowing fan and cannot be reversed, the mine map is up to date and no mining has occurred since we last ran this mine. The coal is walking height and the roof is supported by roof bolts. Water has been a problem in the past but we keep it under control and the water areas are checked during the pre-shifting of the mine.

Good Luck

Instructions to the Team

Problem

Explore all areas of the mine that can be explored safely

Bring all survivors to the surface

The power to mine is off and cannot be turned on

The power to the blowing fan is off but can be turned on, Once the fan is started it cannot be turned off, reversed, and we do not want it to be stalled. It will only run in the blowing mode

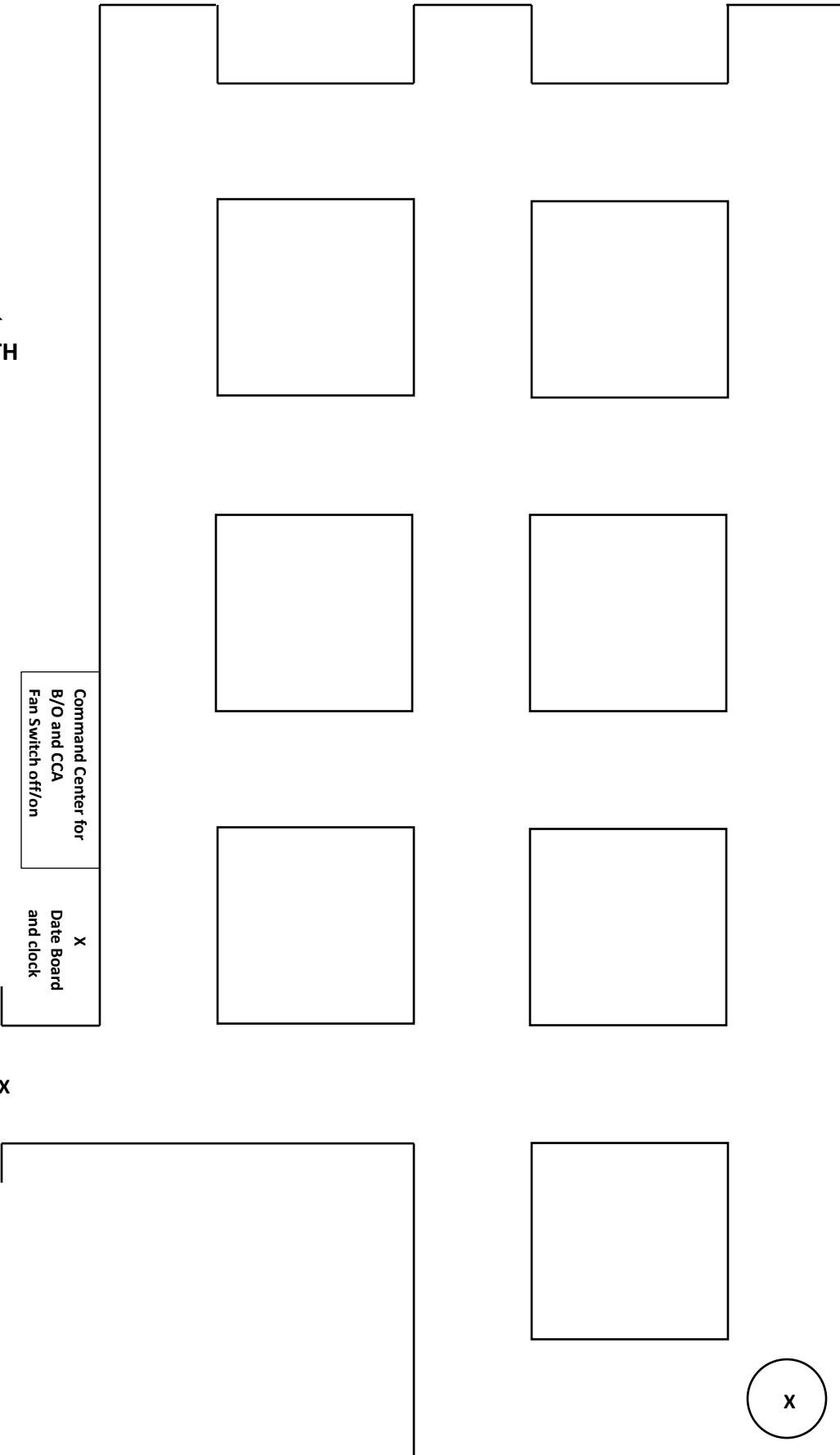
You will have 75 minutes to work this problem and will be given a 10-minute warning at 65 minutes

If a diagonal ventilation build is required to make it air tight secure the clips to each corner of the intendent corner to build it on and the two curtains needed to make the diagonal must be clipped together in the middle. Sagging of the curtain will not affect its airtight intent.

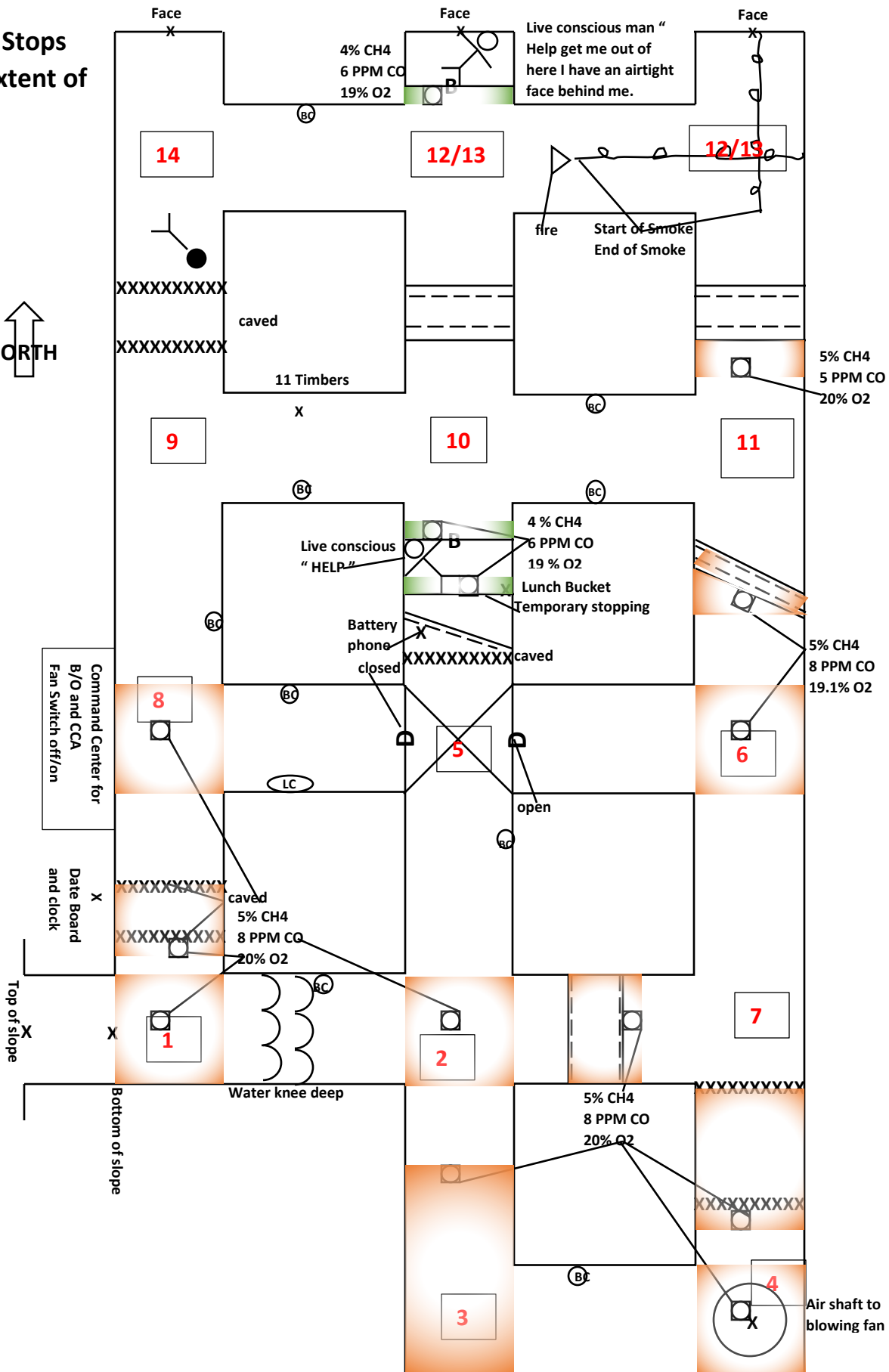
We do not want the barricades torn down or moved from their locations if you wish to use the barricade elsewhere as a build just ask the judge and he will give you a brattice to use in place of the barricade material.



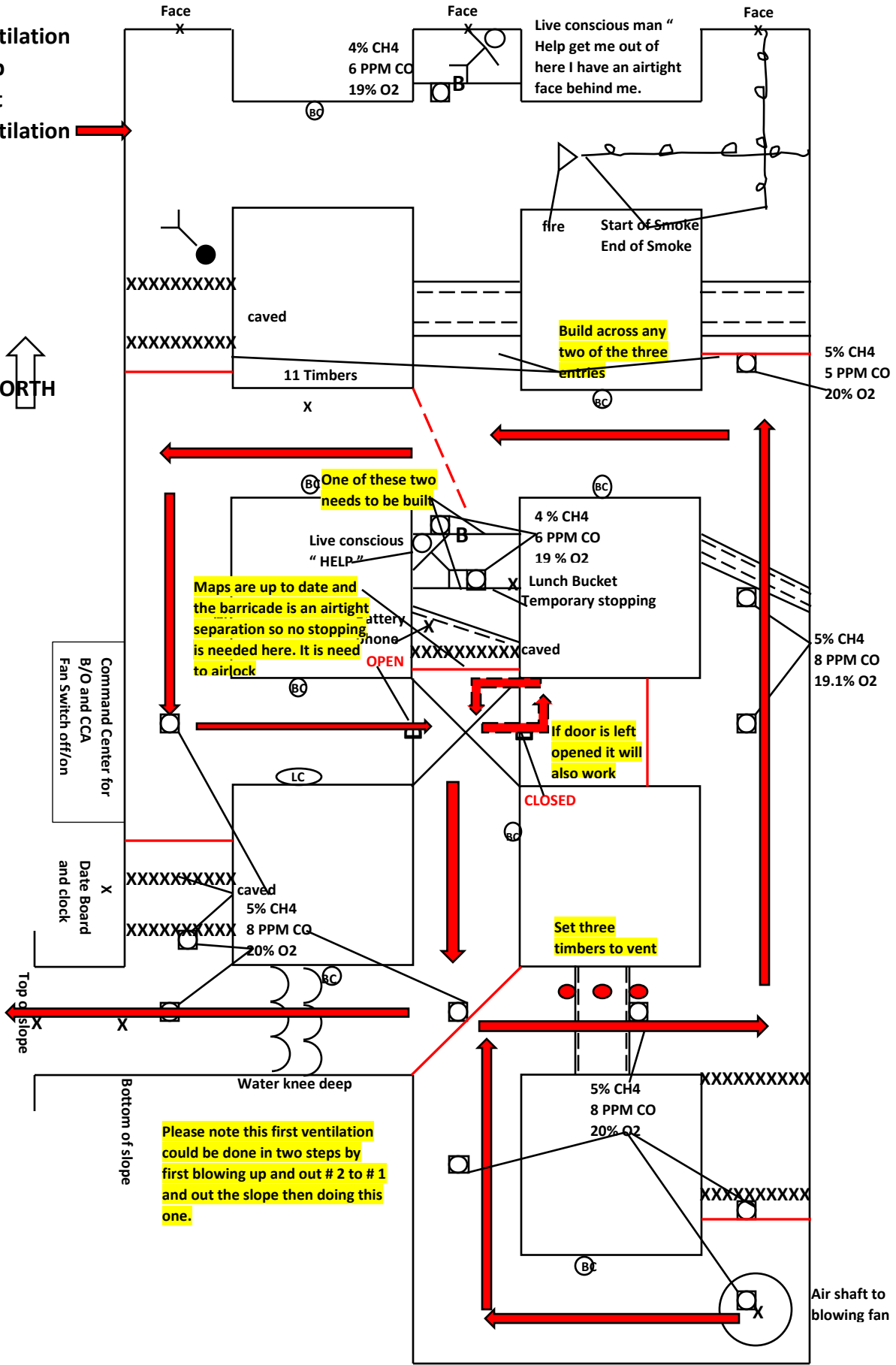
X
Top of slope



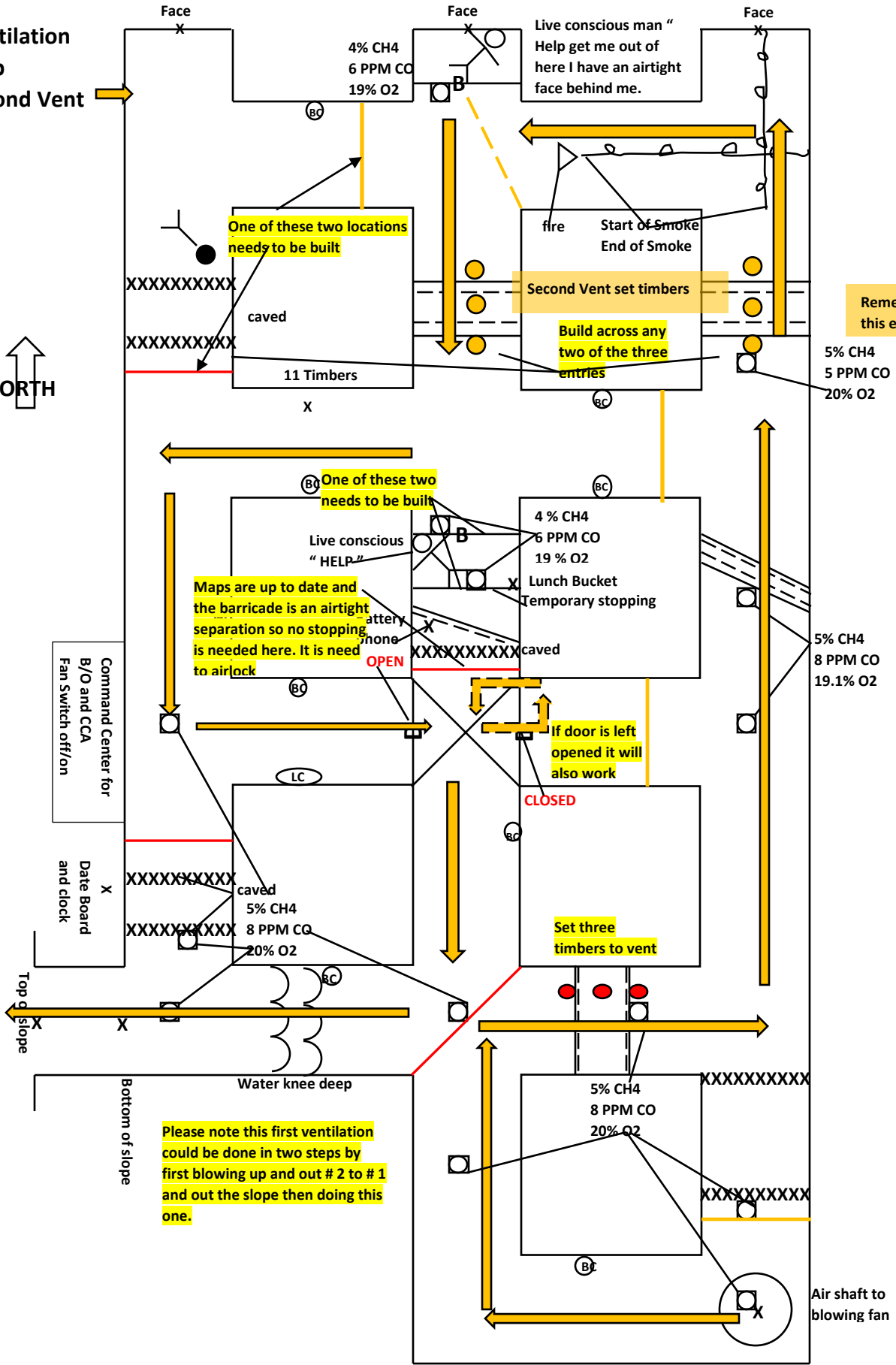
Team Stops and Extent of Gas



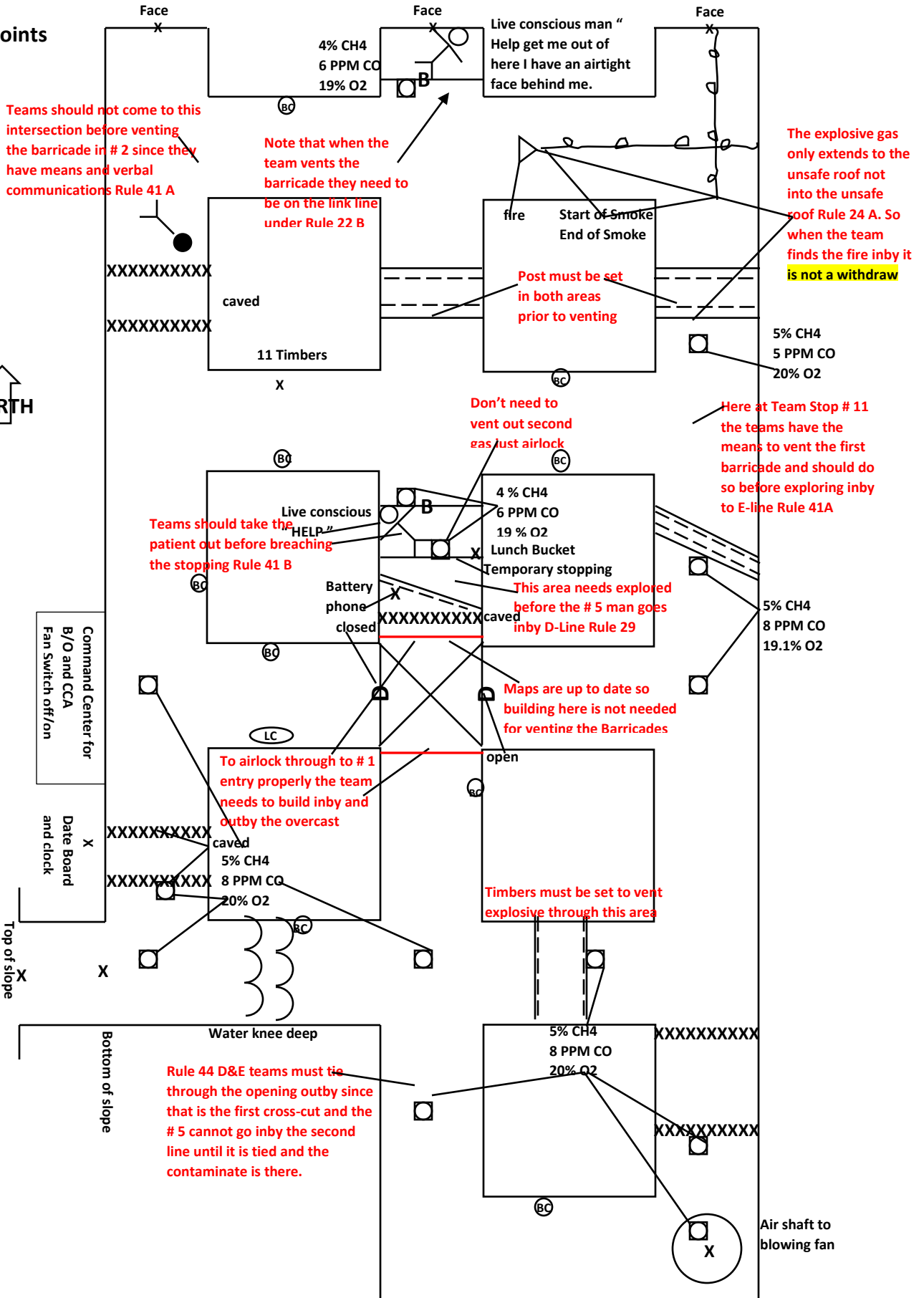
Ventilation
Map
First
Ventilation



Ventilation Map
Second Vent



Key Points Map



Key Points

The statement given to the team tells them that 3 men are missing, the blowing fan is off but can be turned on when needed. The fan cannot be reversed; we do not want it stopped or stalled. They are to explore all areas of the mine that can be explored safely under Rule 44 A. There is a 75-minute time limit that will have a 10 min. warning at 65 minutes. The mine is a 3 entry system with the air shaft located in the # 3 entry to the south of the slope bottom with a North direction arrow on the map.

Team Stop # 1 is at the bottom of the slope the statement tells the team that the fan is in # 3 entry to the south of the slope bottom and is shown on their maps. Also on their maps is a North directional arrow which will indicate that the entries run North/South and they are in # 1 entry since the map shows the fan in # 3 entry. In by in # 1 entry the team is blocked by a caved area with an explosive gas mixture touching the caved this will put the explosive gas mixture in the caved. In the intersection there is an explosive gas mixture in the cross cut toward # 2 entry there is an area of water knee deep.

Team Stop # 2 is in the intersection of # 2 entry with an explosive gas mixture in the intersection in by in # 2 entry there is nothing in the cross cut toward # 3 there is unsafe roof across the entry and outby there is an explosive gas mixture. Rule 44 require the team to tie behind and into the unblocked entry with the contaminate first.

Team stop # 3 is in # 2 entry outby with a solid rib outby and nothing in the open accessible cross cut toward # 3 entry, this should be considered A line as far as breaks are concerned. Team stop # 4 is in A-line of # 3 entry where the team finds an explosive gas mixture in the intersection and the Air Shaft. In by the team finds an explosive gas mixture touching a caved area which means the gas extends into the caved.

Team stop # 5 is in C line of # 2 entry where the team finds an overcast with a closed door in it toward # 1 entry and an open door in the overcast toward # 3 entry. In by the team finds a caved area across the entry. Please note that a team that has not tied to the shaft before bring the # 5 man in by the in by corner of the intersection in # 2 entry at the overcast should be discounted for non-systematic under Rule 44.

Team stop # 6 will be in C line of # 3 entry with an explosive gas mixture in the intersection in by they find another explosive gas mixture touching the diagonal unsafe roof across the entry. The team must tie outby in # 3 entry before returning to # 2 entry because of the explosive gas down at the caved area by the air shaft.

Team Stop # 7 is in B line of # 3 entry there is a caved area on the imaginary line of the intersection which requires the entire intersection to have a roof and rib test made before the team leaves the area. In the cross cut back toward # 2 entry there is an explosive gas mixture touching the unsafe roof across the entry.

Team stop # 8 will be in C line of # 1 entry the team will need to air lock through the closed door in the overcast by closing the door toward # 3 entry, building in # 2 entry in by and outby the overcast as described under Rule 42 paragraph 6. In # 1 entry the team finds an explosive gas mixture in the intersection, outby the find a caved across the entry.

Team stop # 9 is in D line of # 1 entry with a caved across the entry in by and 11 timbers in the cross cut toward # 2 entry.

Team stop # 10 is in D line of # 2 entry please have the patient yell out “help” when the captain enters the intersection. Inby in # 2 entry there is unsafe roof across the entry outby there is an irrespirable gas mixture and a barricade. The team does not have the means to ventilate yet so they will continue to explore.

Team stop # 11 will be in D line of # 3 entry where the team will find an explosive gas mixture inby in the entry and an unsafe roof across the entry. Please note that the explosive gas does not extend to and touch the unsafe roof but is back away from it. Outby the team will find the inby side of the diagonal unsafe roof where the captain’s presence travels above and below it so the in-between area is known. The team now has the means to ventilate the barricade (see the ventilation drawing). If the team does not ventilate the barricade they should be discounted for delay of patient. Once the barricade has been ventilated the team will need to air lock in since the patient does not say it is airtight behind him. Once inside the captain must take a gas test after breaching the barricade, he must touch by hand the patient and date and initial his location and an assessment must be made on the patient. The patient is next to an irrespirable gas placard so he must be properly protected before being moved with a breathing apparatus, carevent, or SCSR. The captain can reach the temporary stopping outby the patient, date and initial it and make a gas test at it or another team member can take the gas test also. The lunch pail should be checked also, but the team should not attempt to airlock through the temporary before taking the patient out under Rule 41 b and should be discounted for delay if they do not take him out under Rule 41 B.

The team can remove the patient to the outside without disturbing existing ventilation **but they have three gas boxes to make gas test at on their way outside**. Once the patient is outside the team must return to the temporary stopping in # 2 entry at team stop # 10 to air lock through it under Rule 29 paragraph # 4 since it is accessible as described under Rule 44. Once inside they will find a diagonal unsafe roof that has a battery phone in the unsafe roof. The team does not have to ventilate the irrespirable out in front of the temporary stopping since there was no response from behind the stopping per Rule 35 paragraph 2.

Team stop # 12 can be in E-line of # 2 entry or # 3 entry at the team’s discretion they will need to use their timbers to post through the unsafe roof. If the team advances inby in the # 2 entry have the patient yell out when the captain enters the intersection, (Help get me out of here I have an airtight face behind me). They will find an irrespirable gas mixture in front of the barricade and they have a response from behind the barricade. In the cross cut toward # 3 entry in E line there is a fire, (this is not a withdraw situation due to the fact that the explosive gas mixture stops at the unsafe roof in # 3 entry and does not extend inby). The captain must test the roof and rib, take a gas test and extinguish the fire before any team member passes the fire. Then the team finds smoke extending toward # 3 entry. Please note that the team members must be attached to the link line in smoke and before the team travels over to #3 entry the team must tie off in air clear of smoke prior to advancing in smoke. If they make E line in # 3 entry **Team stop # 13 the captain must test the fire area in the cross cut before any team member passes the fire area when the team retreats back through the area.**

Team stop # 12 can also be in # 3 entry if this is the case the team will need to timber through the unsafe roof in # 3 please note that if the team built in # 3 entry to block air movement they will need to air lock in to post this direction since the fan must be kept running. If the team does not have two of the three entries blocked from air movement between D and E lines they will migrate air inby and can be discounted under Rule 30 and 31. Once in the intersection the team will be in smoke and must tie off prior to entering smoke. There will be a face inby and in the cross cut toward # 2 entry the fire that will need treated as mention above.

Remember all team members must be attached to the link line when in smoke and tied off outby the smoke before traveling into it.

Team stop #13 can be in either # 2 or # 3 entries but regardless which entry it is in before the team travels to # 1 entry in E line they have the means to ventilate the second barricade and if they do not do so they should be discounted under Rule 41 A. See the ventilation map for the 2nd ventilation, but please take **note that all team members must be attached or holding onto the link line since they will be ventilating smoke over the team regardless of which side of the curtain they are standing on.** Note also that since the patient tells the team he has an airtight face behind him they will not need to airlock in to get the patient once the irrespirable has been removed. Remember once inside the barricade the captain must take the gas test after breaching the barricade, the captain must touch the patient and date and initial his location. The patient needs an assessment made on him and the face requires date and initials, gas test, roof, face and rib test made. On the way out there are three gas boxes that will need re-checked since ventilation was changed in the affected area of the travel out with smoke and irrespirable ventilated out. Once the patient is outside the team will need to return to E line to continue to explore for team stop # 14.

Team stop # 14 is in E line of # 1 entry where the team encounters a body outby which needs touch by captain's hand and date and initial, a caved area that needs a roof and rib test made, gas test, and date and initials. Inby there is a face which also needs a gas test made, date and initials, and a roof, face, rib test made.