



**Ohio Valley Tri-State Post # 6  
Mine Rescue, Bench, Pre-Shift,  
First Aid Competition**



## Post # 6 Mine Rescue Contest

Welcome to Penitentiary No.1 Mine, which is the penitentiary own mine where the inmates mine coal for heating the penitentiary. The cell 1 section is a three entry gate section being driven off the West Sub Mains. Today at approx. 7:15 am smoke was seen coming from our main fan. We traveled into the mine but were called out as we approached the cell 1 section due to gas reading which were taken from the main fan. There were 5 (five) inmate miners working on the cell 1 section and we have not heard from them. Attempts to contact the five miners was unsuccessful, No one else is underground at this time. The air for the cell 1 section comes from a split shaft in the Sub Mains with intake coming up No.2 entry and going out No.1 entry. The fan is running and cannot be shut off, reversed, or stalled. Please account for our 5 (five) inmate miners .There is no power in the mine and we cannot get power until the sub-station is repaired which will take two days. This is all the information I have at this time. GOOD LUCK!!!

# Written Instructions

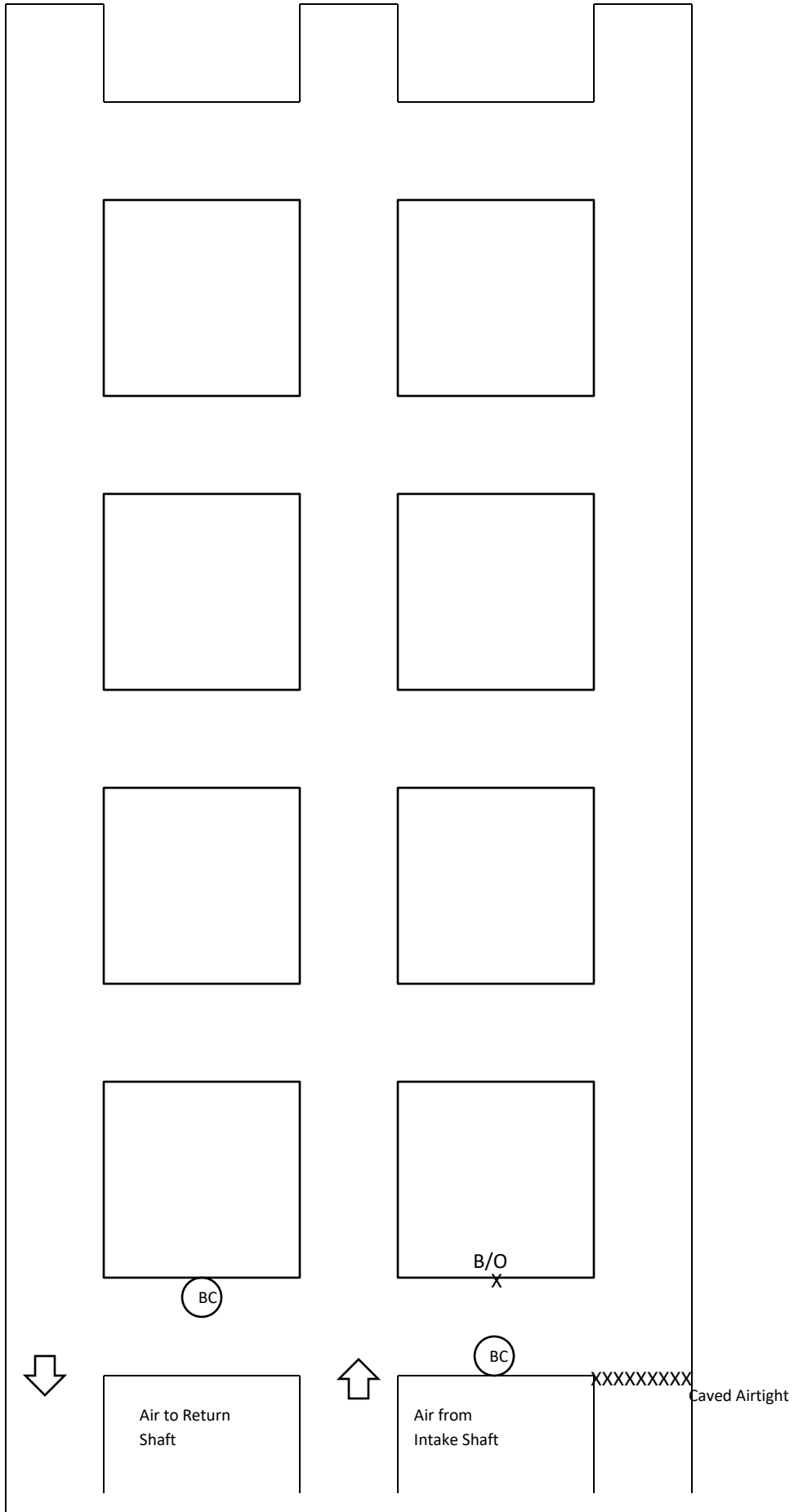
Account for all the missing miners and bring live  
Persons to the fresh air base

Explore all areas of the mine that can be explored  
safety

The Exhaust fan is running and cannot be reversed

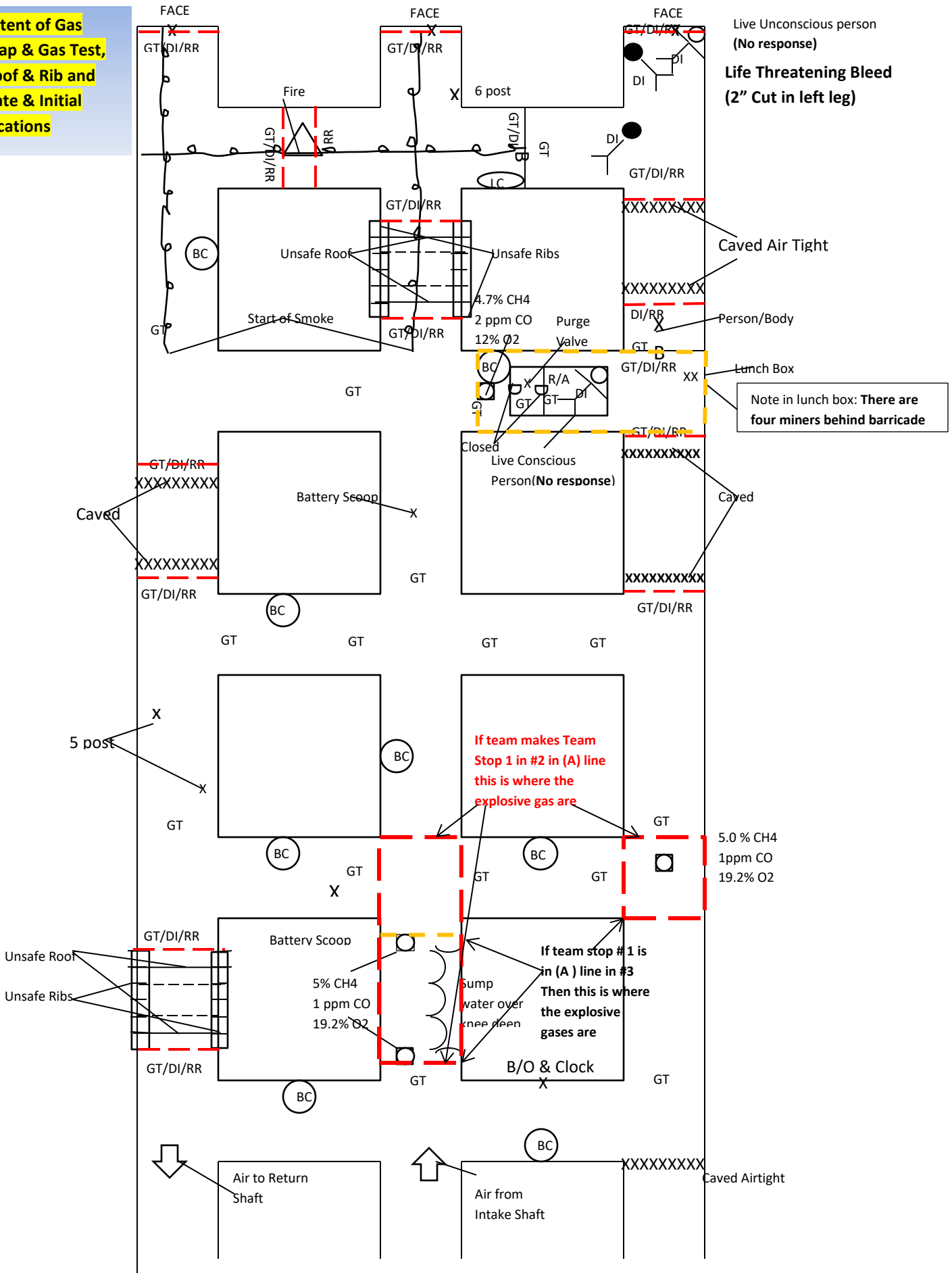
You may only carry two brattice at any time.

You will have 60 minutes to work this problem.

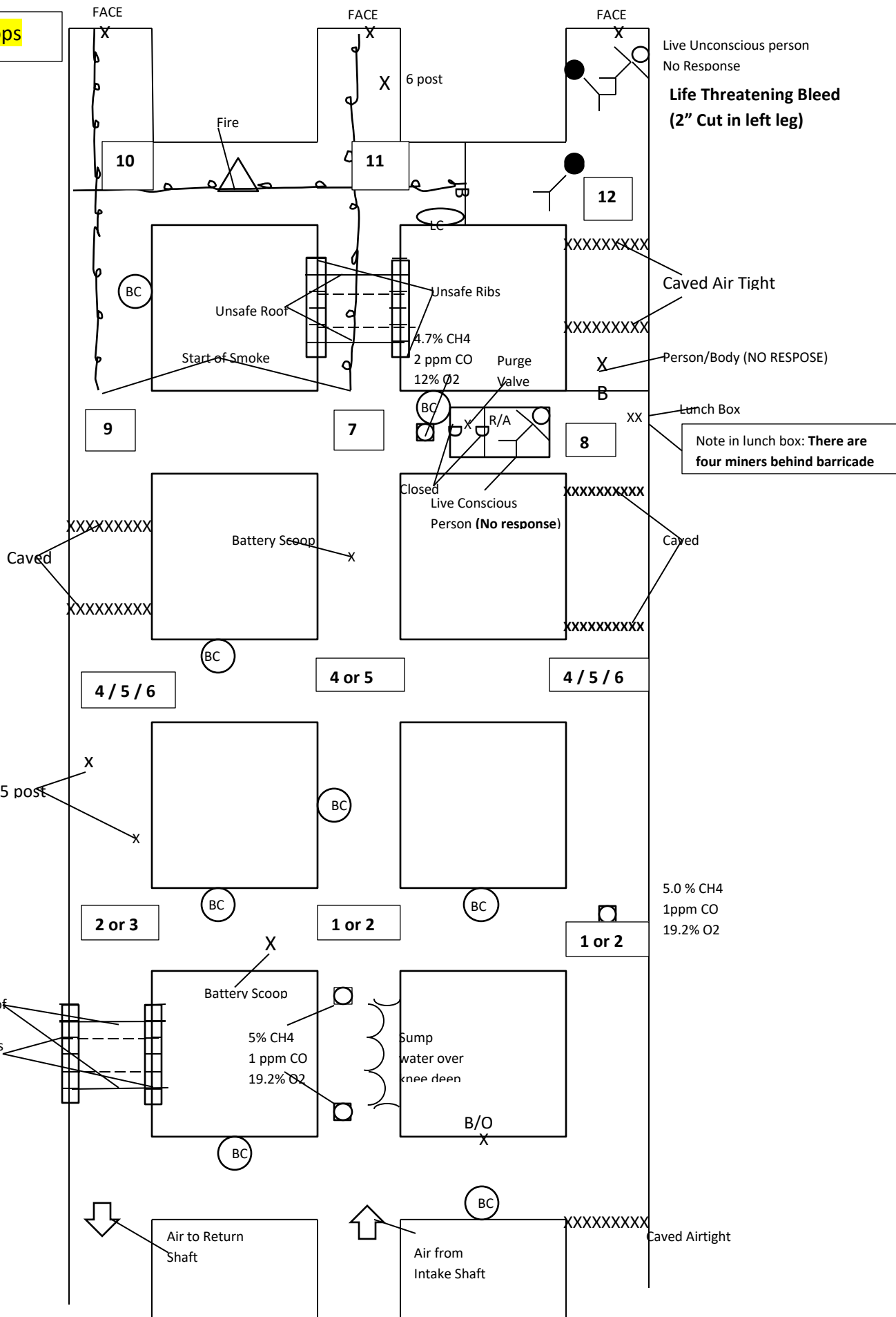




**Extent of Gas  
Map & Gas Test,  
Roof & Rib and  
Date & Initial  
locations**



**Team Stops**





## Judges Instruction

Fresh Air Base Procedures on page 8 of the NMR rules gives the team 4 minutes to position their equipment before the clock is started. The team must follow Rule 26 for starting the clock and date and initial the check board and no work can be done until the clock is started. Once the clock is started the team is handed the maps and problem. Then under Rule 6 & 7 of the B-Card for getting under oxygen. Then make initial portal checks from the fresh air base after getting under oxygen and gas test under rule 24.

**Team stop # 1** can be in # 2 entry of A-line this requires gas test in all opening of the intersection under Rule 24 B, and the first pack check needs completed before the team moves under Rule 28. **Note that as the team advances up #2 entry to team stop # 1 in A-line they encounter two gas placards which will allow the explosive gas to extend into the unexplored area that is shown as a sump with water over knee deep and into the intersect of # 2 entry of A-line.** The water over knee deep cannot be examined and cannot be traveled through without a pump and under Rule 23 for the captain's presence to make the appropriate roof test it mentions only unsafe roof and caved areas not water over knee deep. What this will mean is that if a team sets up ventilation to go up or out # 2 entry between the fresh air base and the first intersection in #2 of A-line they will be ventilating an explosive through an unexplored area and should be discounted under Rule 31C and under Rule 30 F for ventilating an irrespirable through an unexplored without having everyone accounted for. The team then has an option of which direction to go for team stop # 2 it can go to # 1 entry in A-line or # 3 entry in A-line due to Rule 45A.

If the team chooses to make Team Stop # 1 in A-line in # 3 entry they will encounter a gas placard in the center of the intersection. This places the explosive mixture in the entire intersection (see the Extent of Gas Sketch Figure 4 on page 46 of the NMR rules). The team is required gas test in all openings of the intersection under Rule 24 B, they are required their 50 ft. pack check under Rule #28. This option then allows the team to travel through the open cross cut of 3 to 2 in A-line for Team Stop # 2 in # 2 entry of A-line. Which if it is done this way this will position the explosive gas located outby the intersection of # 2entry instead of in the intersection.

**Team Stop # 2** can be in A-line in #3entry if the first team stop was in #2 entry this will require gas test in all openings in the intersection and the explosive gas encountered in the intersection is only in the intersection as shown in Figure 4 on page 46 of the NMR Rules.

**Team stop # 2 can also be in # 1 entry of A-line** through open and accessible cross cut under Rule 45 A if the first team stop is in # 2 entry of A-line. In #1 entry the team is required gas test in all openings under Rule 24B and Roof and Rib test outby the intersection at the unsafe roof under Rule 23, along with date and initial at the unsafe roof under Rule 27.

**Team Stop # 2 can be in # 3 entry of A-line** as previously mentioned and described due to Rule 45A and the functions of this team stop would require gas test in all openings of the intersection.

**Team Stop # 3** can be in entry #1 or #3 depending on which option the team took for Team Stop #2 and the functions at each team stop has been discussed in previous options for team stop #2.

**Team Stop #4** can be in entry # 1, 2, or 3 of B-line it is Captain's choice, but regardless of which entry the team takes it must tie across through the open cross cuts which are assessable before advancing inby to C-line under Rule 45A.

**Option with Team Stop # 4 in # 1 entry of B-line** the team encounters a caved area inby the intersection of B-line here a Gas test is required in all openings under rule 24B, a roof and rib test is required at the caved area under Rule 23 along with a date and initial under Rule 27 the opening toward # 2 entry requires a gas test under Rule 24B. The tying to # 2 entry through the open accessible under Rule 45A is required.

**Option with Team Stop # 4 in # 2 entry of B-line** again all openings of the intersection require a gas test under Rule 24B Please note the Battery Scoop located inby the intersection in # 2 entry. This option allows the team to tie across through the open accessible to either # 1 entry or # 3 entry through B-line.

**Option with Team Stop # 4 in # 3 entry** gas test are required in all openings of the intersection under Rule 24B and inby the intersection at the unsafe roof a roof and rib test would be required under Rule 23 and a date and initial under Rule 27. Then tie across to # 2 entry through the open cross cut under Rule 27.

**Team Stop # 5 & Team Stop # 6** will be decided by where the team decides that Team Stop #4 will be and the procedures at each of those stops have been described in team stop # 4 options in the previous paragraphs.

**Team Stop # 7** will be in # 2 entry of C-line( please note the battery scoop the team passes in # 2 entry between B-line and C-line). In the intersection gas test are required in all openings of the intersection under Rule 24B. Please take notice that smoke starts at the inby imaginary line of the intersection and under Rule # 22 all team members must be attached to the link line before any team member reaches into the smoke, and if the team is using radios they must be tied off in air clear of smoke before the team travels into smoke. The # 5 man can stop in the intersection in air clear and the Captain may reach into the smoke to test the Roof at the Unsafe Roof and date and initial there as well as take the gas test as long as all the team members are attached to the link line without tying off since they won't be traveling into the smoke at that time. The cross cut toward # 1 is clear requiring the gas test along with the Captain's presence. The cross cut 2 toward 3 in C-line there is a gas placard which is irrespirable this gas will extend through the cross cut into the intersection in # 3 entry of C-line( reference Extent of Gas Sketch Figure 4 on page 46). The next thing encountered will be a Refuge Alternative under Rule 27 a date and initial is required at the door of the R/A , and there is no response from the R/A. This will allow the team to continue to explore if it chooses to do so rather than enter the R/A. Under Rule # 36 the team may choose to enter the R/A using the procedure described under Rule #36 paragraph 4 for irrespirable atmosphere outside of the R/A. This will require the Captain and another team member to open the outer door of the R/A then the Captain must take a gas test then enter the R/A and close the outer door then if the air inside the R/A is clear open the inner door of the R/A and take another gas test. Once this is done the Captain and team member may enter and find the Live Conscious person. The Captain is required under Rule # 27 to date and initial the persons location, then under Rule # 32 the Captain is required to make contact by hand, under Rule # 12 an assessment is required, and under Rule # 34 proper protection must taken for the patient before he lead out of the R/A into irrespirable atmosphere. In other words a SCSR, Apparatus, or CarEvent must be properly put on the patient. Please note that if any of the mention steps are not followed in the R/A as mentioned according to Rule 36 paragraph 1 any gas testing discounts are to be discounted under Rule #24 and any discounts for not protecting the patient are to be discounted under Rule #34. Since the patient is conscious he maybe walked out to the fresh air base.

**Team Stop # 8** will be in # 3 entry of C-line due to the contaminate which is located in the cross cut 2 to 3 in C-line under rule 45C. Here the irrespirable extends into the intersection of # 3 entry, (see Figure 4 on page 46). The openings of the intersection require gas test under Rule #24B the barricade on the inby imaginary line requires a gas test under rule 24A, a date and initial at the barricade under Rule 27 and there is no response from the barricade. Outby the intersection the team will find unsafe roof across the entry which will require a roof and rib test under Rule # 23 a date and initial under Rule #27 a gas test as described in Rule # 24B. There

is a lunch box located in the intersection which under Rule #48 any member of the team may examine, and there is a note inside the lunch box. Since there is irrespirable atmosphere in the intersection the irrespirable will need remove by ventilation prior to breaching this barricade under Rule #35. If the team does decide to breach the barricade they should be discounted under Rule #35 if they have not ventilated and they will need to build two temporary stoppings to air lock in since the barricade is on the imaginary line under Rule # 43.

**Team Stop # 9** will be in # 1 entry in C-line here a gas test is required in all openings of the intersection under Rule #24B. Please note that the inby imaginary line of the intersection starts smoke so before any team member reaches into or travels into all team members must be attached to the link line and if using radios tie off in air clear of smoke first under Rule #22. Outby the intersection the team encounters caved across the entry which requires a roof and rib test under Rule # 23 and a date and initial under Rule #27.

**Team Stop #10** will be in # 1 entry in D-line where the team must before leaving C-line tie off in air clear of smoke if using radios before advancing into smoke under Rule 22. Once at Team Stop # 10 gas test are required in all openings of the intersection, inby there is a face which requires a roof, face, rib test under Rule 23, and a gas test at the Face under Rule 24 (which will suffice for the gas test in the opening) along with a date and initial under Rule 27. In the cross cut of 1 to 2 of D-line there is a fire that requires a roof and rib test perpendicular to direction of travel under Rule 23 paragraph 7, a gas test under Rule 24, a date and initial under Rule 27. Please note that the team is still in smoke and every team member must be attached to the link line and the #5 man to the line tied off outby in fresh air.

**Team Stop # 11** will be in # 2 entry of D-line again all openings require a gas test. Inby there will be a face that requires a roof, face, and rib test, a gas test at the Face, and a date and initial. Outby the intersection at the unsafe Roof a roof and rib test is required and a date and initial. In the cross cut 2 to 3 the team will find a barricade and get no response a gas test and date and initial are required here. Since smoke extends to the barricade and smoke is irrespirable under Rule 35 the irrespirable air must be removed before breaching the Barricade.

Since the team receives no response from either barricade it will be team choice as to which barricade to set up ventilation for first. **Option 1** is to travel outby and ventilated up # 3 entry to remove the explosive gas as shown in the ventilation map as first ventilation. Then they could ventilate up # 3 entry through the caved area over top of the R/A down # 2 entry as shown on the ventilation map in orange. This will clear the outby barricade. **Option 2** will be to ventilate out the inby barricade which would require timbering through the unsafe roof in # 2 entry between C-line and D-line. This sets up the ventilation for the outby barricade and allows the inby barricade to be entered first. See the yellow air course of the ventilation map.

Whichever way the team chooses they may depending on if they timber out # 2 entry first , then travel back pass the fire area between # 2 and # 1 entries which will require a roof and rib test before any team member passes the fire area to be done for each trip pass the fire area.

**Team Stop #12** will be in the intersection of # 3 entry in D-line if the team chooses to ventilate the inby barricade first. After ventilating out the barricade the team will need to air lock in under Rule #43 since there is no response. The captain must take a gas test after breaching the Barricade and then can proceed through the cross cut. The captain will encounter a body in the cross cut which requires contact by hand under Rule 32 and a date and initial under Rule 27. Then once stopped in the intersection the captain may go outby and encounter the caved air tight area that will require gas test in the opening, a roof and rib test and a date and initial. Inby the captain will encounter another body which requires touch by hand and a date and initial before passing the body then a live unconscious person is encountered which require the captain's touch by hand and a date and initial. This will also require an assessment under Rule #12 paragraph 3 and treatment for a life threatening bleed under Rule #12 paragraph 4 the injury must be touched by a gloved hand. The life threatening bleed procedure is covered under Rule #34. While this is being done the Captain make complete

the examination of the Face by taking a gas test, a roof, face, rib test and date and initial. Then take the patient to the surface once he is loaded on the stretcher under Rule #11.

If the team chooses to enter the outby barricade first after the irrespirable has been removed the team will need to build two air lock walls to properly air lock according to Rule #43, one in the cross cut of 3 to 2 in C-line and one outby the intersection in # 3 entry due to the barricade being on the imaginary line. Once the barricade is breached the Captain must take the gas test then precede inby where he will encounter a person placard. Once he touches the person placard (he requires to do this under Rule #32) then date and initial (**at the placard not on it**), **the placard is to be turned over and it will be a body**. Then the captain can reach the caved airtight and date & initial and roof and rib test.

1. This scenario applies if the team breaches the inby stopping first also or uses the first scenario of Team Stop #12 of going in the inby barricade first and applies it after the team enters the outby barricade first.