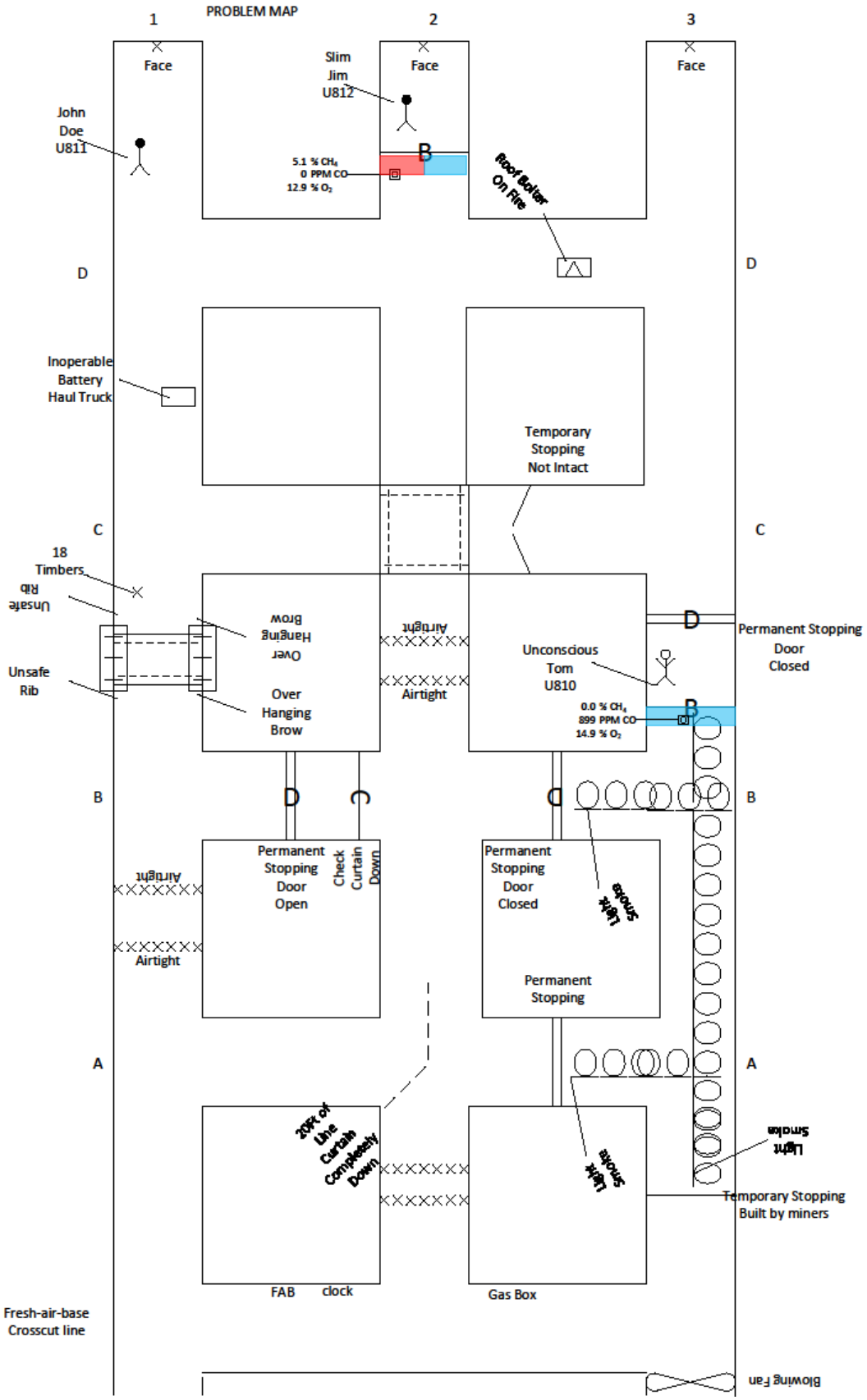
Tennessee Regional Mine Rescue Contest

Caryville, Tennessee
May 5, 2016

This statue represents our nation's miners at their best, when disaster has caused these miners to evacuate from their work area the one miner is leading his fellow miner to safety.


PROBLEM MAP
1
2
3
Face
Face
Face
Slim
Jim
U812
John
Doe
U811
5.1 % CH4
0 PPM CO
12.9 % O2
B
Roof Bolter
On Fire
D
D
Inoperable
Battery
Haul Truck
Temporary
Stopping
Not Intact
C
C
18
Timbers
Unsafe
Rib
Over
Hanging
Brow
Airtight
Airtight
Unconscious
Tom
U810
D
Permanent Stopping
Door
Closed
Unsafe
Rib
Over
Hanging
Brow
Over
Hanging
Brow
0.0 % CH4
899 PPM CO
14.9 % O2
B
B
B
D
D
Permanent
Stopping
Door
Open
Check
Curtain
Down
Permanent
Stopping
Door
Closed
Light
Smoke
Airtight
Airtight
Permanent
Stopping
A
A
20Ft of
Line
Curtain
Completely
Down
Light
Smoke
Light
Smoke
Temporary Stopping
Built by miners
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
Blowing Fan

Mine Manager Statement to the Team

Welcome, my name is _____, I'm the mine manager here at Volunteer Salt Mine. You are located in the first line of crosscuts where the fresh air base has been established by a mine rescue team before your arrival. The team was able to establish this line only and was pulled before making any of the openings inby this line due to low oxygen cylinder pressure on one of the team member's apparatus. This morning a three man crew entered the mine to work on the roof bolting machine. Around 9:35am the lead man called out and reported the Diesel rubber tired roof bolter had caught on fire and they were going to try to extinguishing it. He had requested the fan to be shut off where they could build some temporary controls to see if they could better control air around the fire. This is the last we have heard from the miners. The outside man turned the fan off as requested, then called Myself, MSHA and State Agencies, and mine rescue services like yourself , they are other teams onsite as your backup, but will not be able to assist your team in working the problem. I will have my electrician start or stop the blowing fan when requested by your team through the fresh-air-personnel.

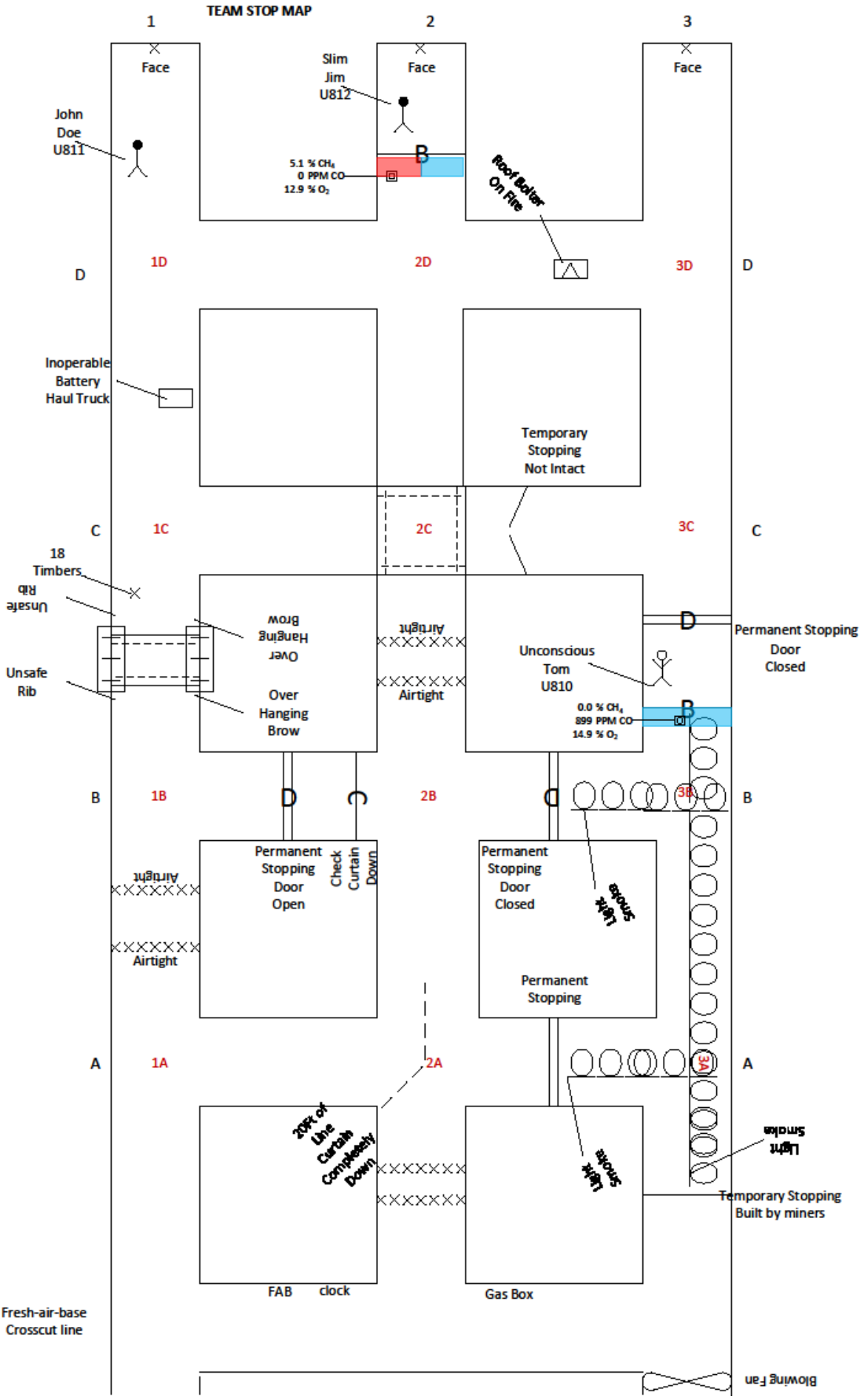
Pertinent Mine Information:

The mine is a single level room and pillar drift salt mine.
The roof is supported with 4 foot rock bolts in all areas except areas the team may encounter inby that are caved.
The mine is walking height.
The mine has a supply of timbers that are kept in the mine that can be used if need to timber through areas deemed unsafe roof if needed to rescue the miners.
The mine uses diesel and battery powered equipment.
The mine has encountered methane in active workings.
The mine is listed as a category III mines in which noncombustible ore is extracted which liberate a concentration of methane that is explosive, is capable of forming explosive mixtures with air, or have the potential to do so based on the history of the mine, or the geological area in which the mine is located.
The mine is ventilated with a blowing only fan that is not running at this time that is located outby your location in the number 3 entry.
The mine map is up-to-date.
The mine has no known old works around the reserves or known gas wells.
All electrical power is locked and guarded at the surface substation on the surface except for power to run the fan if needed.

Good Luck

Team written Instructions

1. Account for all missing miners
2. Bring any live miners to the Fresh-Air-Base.
3. Explorer all areas that can be done safely
4. Any permanent stoppings in the mine cannot be removed from the location found, if a mandoor is found in a permanent stopping the team may elect to travel through if needed but cannot breach any other way.
5. Building material is provided with hooks on each end, to be considered as airtight the team must have both clips hooked on adjacent ribs.
6. All materials needed to work the problem is on the field.
7. Your team has 75 minutes to complete the problem and stop the clock. Your team will be stopped if the problem is not completed in the allowed time.


TEAM STOP MAP
1
2
3
Face
Face
Face
Slim
Jim
U812
John
Doe
U811
5.1 % CH4
0 PPM CO
12.9 % O2
Roof Bolter
On Fire
D
1D
2D
3D
D
Inoperable
Battery
Haul Truck
Temporary
Stopping
Not Intact
C
1C
2C
3C
C
18
Timbers
Unsafe
Rib
Unsafe
Rib
Over
Hanging
Brow
Over
Hanging
Brow
Airtight
Airtight
Unconscious
Tom
U810
Permanent Stopping
Door
Closed
0.0 % CH4
899 PPM CO
14.9 % O2
B
1B
2B
3B
B
Permanent
Stopping
Door
Open
Check
Curtain
Down
Airtight
Airtight
Permanent
Stopping
Door
Closed
Light
Smoke
Permanent
Stopping
A
1A
2A
3A
A
20Ft of
Line
Curtain
Completely
Down
Light
Smoke
Light
Smoke
Temporary Stopping
Built by miners
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
Blowing Fan

Prior to starting the clock the team can place equipment on the field in fresh-air –base and communication line can be strung out, the team will line up and the captain will make his introduction and remarks, The team will get a reply back from the official in charge with the following statement, Yes we do require the service of your mine rescue team and if you are ready you can be of immediate service.

No other work will be done prior to starting clock by the team captain after introductions.

(1)- SJ1-R8---Starting the clock, and captain must mark the date board,(MM/DD/YYYY and team position number). The team will receive from the judges the maps to work the problem at this time along with the written instructions to follow while working the problem .The team will probably take time to study the map and written instruction give before going under Oxygen.

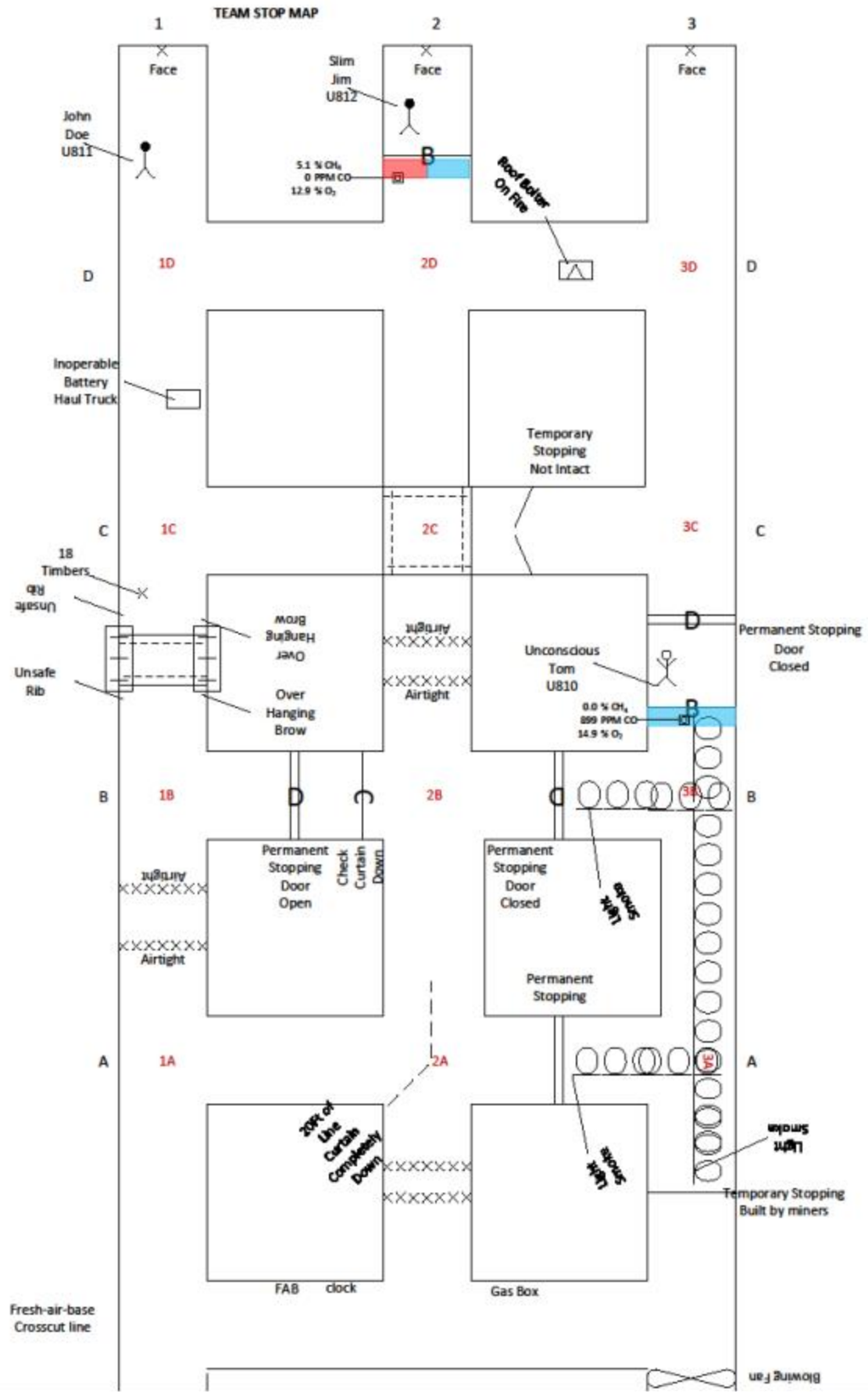
(2)—no equipment has to be checked by the team at this time the team should have already checked prior to reporting to FAB

(3)—SJ1-R6 The team will go under oxygen and the captain will check all apparatus and has his checked

(4)—The team will check all openings now that they are under Oxygen and prior to the whole team going inby the FAB. J1-10a6—endangerment if apparatus are worn while examining the entrances

J1-R 8b1—the captain will enter mine opening A, B and C and verbally indicate he is checking the back or roof, also J1-R8a the captain will indicate to the team he has recognized the bad ground in the B opening at the caved area.

J2-R 1—gas test will be made in openings A and B anywhere in the opening within 25ft, opening C gas


TEAM STOP MAP
1
2
3
Face
Face
Face
Slim
Jim
U812
John
Doe
U811
5.1 % CH4
0 PPM CO
12.9 % O2
Roof Bolter
On Fire
D
1D
2D
3D
D
Inoperable
Battery
Haul Truck
Temporary
Stopping
Not Intact
C
1C
2C
3C
C
18
Timbers
Unsafe
Rib
Unsafe
Rib
Over
Hanging
Brow
Airtight
Permanent Stopping
Door
Closed
Unconscious
Tom
U810
0.0 % CH4
899 PPM CO
14.9 % O2
Over
Hanging
Brow
Airtight
B
1B
2B
3B
B
Permanent
Stopping
Door
Open
Check
Curtain
Down
Airtight
Airtight
Permanent
Stopping
Door
Closed
Light
Smoke
Permanent
Stopping
A
1A
2A
3A
A
20ft of
Line
Curtain
Completely
Down
Light
Smoke
Light
Smoke
Temporary Stopping
Built by miners
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
Blowing Fan

J2-R 1—gas test will be made in openings A and B anywhere in the opening within 25ft, opening C gas test must be at the stopping.

J2-R 4—the team must take a gas read at the gas box located in the fresh-air- base and report the respective gas concentrations

J1-R 9—the captain must mark D & I's at the caved area B opening and at stopping in C opening

SJ1-R10—the team must count off before the whole teams enters the mine

Team Stop #1—1A intersection — J1-R3--the team must conducted a 50ft check of their apparatuses and J1-R5--thereafter re-checks must be completed not to exceed every 20 minutes. J1-R8b1—the captain will break both planes to the intersection and enter each opening and verbally indicate he is checking the back or roof. J1-R8a the captain will indicate to the team he has recognized the bad ground in the #1 entry at the caved area. J1-R9—the captain must mark D & I's at the caved area. J2-R1—gas test will be made in each opening to the intersection. (SJ2-R5 once team has made 50ft check no side by side comparison of the maps or changes (edits) will be allowed on either map while team is at the fresh-air-base for the remainder of the problem),

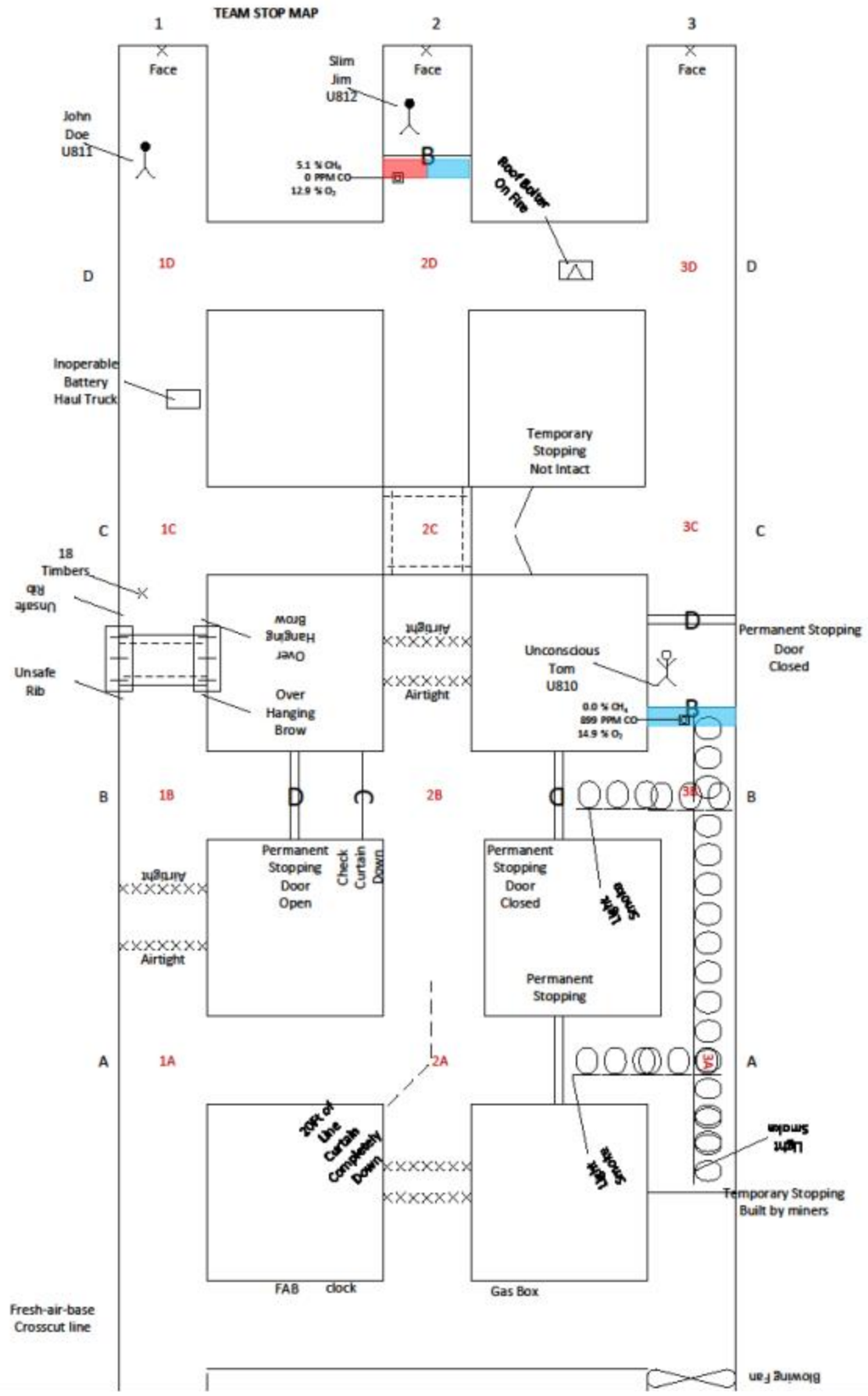
Team will now advance

Team Stop #2—2A intersection, -- J1-R8b1—the captain will break all planes to the intersection and enter each opening and verbally indicate he is checking the back or roof. J1-R8a the captain will indicate to the team he has recognized the bad ground in the #2 entry at the caved area. . J1-R9—the captain must mark D & I's at the caved area and at the permanent stopping. J2-R1—gas test will be made in each opening to the #2 entry and a gas test must be taken at the permanent stopping.

Team has no building material the team will advance

Team Stop #3—2B intersection, --J1-R11—No team member can advance more than 3 feet beyond the intersection into the #2 entry at this time. J1-R8b1—the captain will break all planes to the intersection and enter each opening and verbally indicate he is checking the back or roof. J1-R8b4—the captain will verbally indicate he is checking the back or roof when he passes through the Check curtain, J1-R9—the captain must mark D & I's at the permanent stopping in x-cut between 2 and 3 entries. J2-R1—gas test will be made in the inby opening to the intersection and x-cut going to #1 entry and a gas test must be taken at the permanent stopping in X-cut between 2 and 3 entries

Team will now advance they can advance either way but probably to intersection 1B due to they don't have to airlock.


TEAM STOP MAP
1
2
3
Face
Face
Face
Slim
Jim
U812
John
Doe
U811
5.1 % CH4
0 PPM CO
12.9 % O2
Roof Bolter
On Fire
D
1D
2D
3D
D
Inoperable
Battery
Haul Truck
Temporary
Stopping
Not Intact
C
1C
2C
3C
C
18
Timbers
Unsafe
Rib
Unsafe
Rib
Over
Hanging
Brow
Airtight
Permanent Stopping
Door
Closed
Unconscious
Tom
U810
0.0 % CH4
899 PPM CO
14.9 % O2
Over
Hanging
Brow
Airtight
B
1B
2B
3B
B
Permanent
Stopping
Door
Open
Check
Curtain
Down
Airtight
Airtight
Permanent
Stopping
Door
Closed
Light
Smoke
Permanent
Stopping
A
1A
2A
3A
A
20ft of
Line
Curtain
Completely
Down
Light
Smoke
Light
Smoke
Temporary Stopping
Built by miners
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
Blowing Fan

Team Stop #4—1B intersection, --J1-R11—No team member can advance more than 3 feet beyond the intersection into the #1 entry at this time. J1-R8b1—the captain will break all planes to the intersection and enter each opening and verbally indicate he is checking the back or roof. J1-R8a the captain will indicate to the team he has recognized the bad ground in the #1 entry at the caved area. J1-R9—the captain must mark D & I's at the caved area. J2-R1—gas test will be made in the inby opening to the intersection and outby opening to the intersection

J2-R10--Team will now advance to intersection 3B by air locking through the permanent stopping using the check curtain. Prior to building the airlock, J1-R8b3—the captain must indicate he is checking the back or roof before building the stopping, J2-R11—the team must hook both sides of the check to be airtight. The door can now be opened, J1-R8b4-the captain must verbally indicate he is checking the back or roof before advance through door, J2-R1-a gas test is required on back side of area behind where doors has been opened. The team will find the light smoke before entering the smoke each team members must immediately be checked before entering, J1-R12—someone from the team must obtain

assurance from all the team members by asking if they are okay. J2-R9—all team members must stay connected or have hold of the lifeline at all times when in the smoke.

Team Stop #5—3B intersection -- J1-R11—No team member can advance more than 3 feet beyond the intersection into the #3 entry at this time. J1-R8b.2—the captain will break all planes to the intersection and enter each opening and verbally indicate he is checking the back or roof.. J2-R1—gas test will be made in the inby opening to the intersection and outby opening to the intersection.

Team will now advance out in #3 entry.

Team Stop #6—3A intersection --- J1-R8b.2—the captain will break all planes to the intersection and enter each opening and verbally indicate he is checking the back or roof. J1-R9—the captain must mark D & I's at both stoppings. J2-R1—gas test will be made at each stopping

The team is now tied in, and can go and make all 3 entries where they stopped due to 2+3 rule

Intersection 3B-- J1-R9—the captain must mark D & I's at the barricade, J2-R1—gas test will be made at the barricade. (No Response from the barricade)

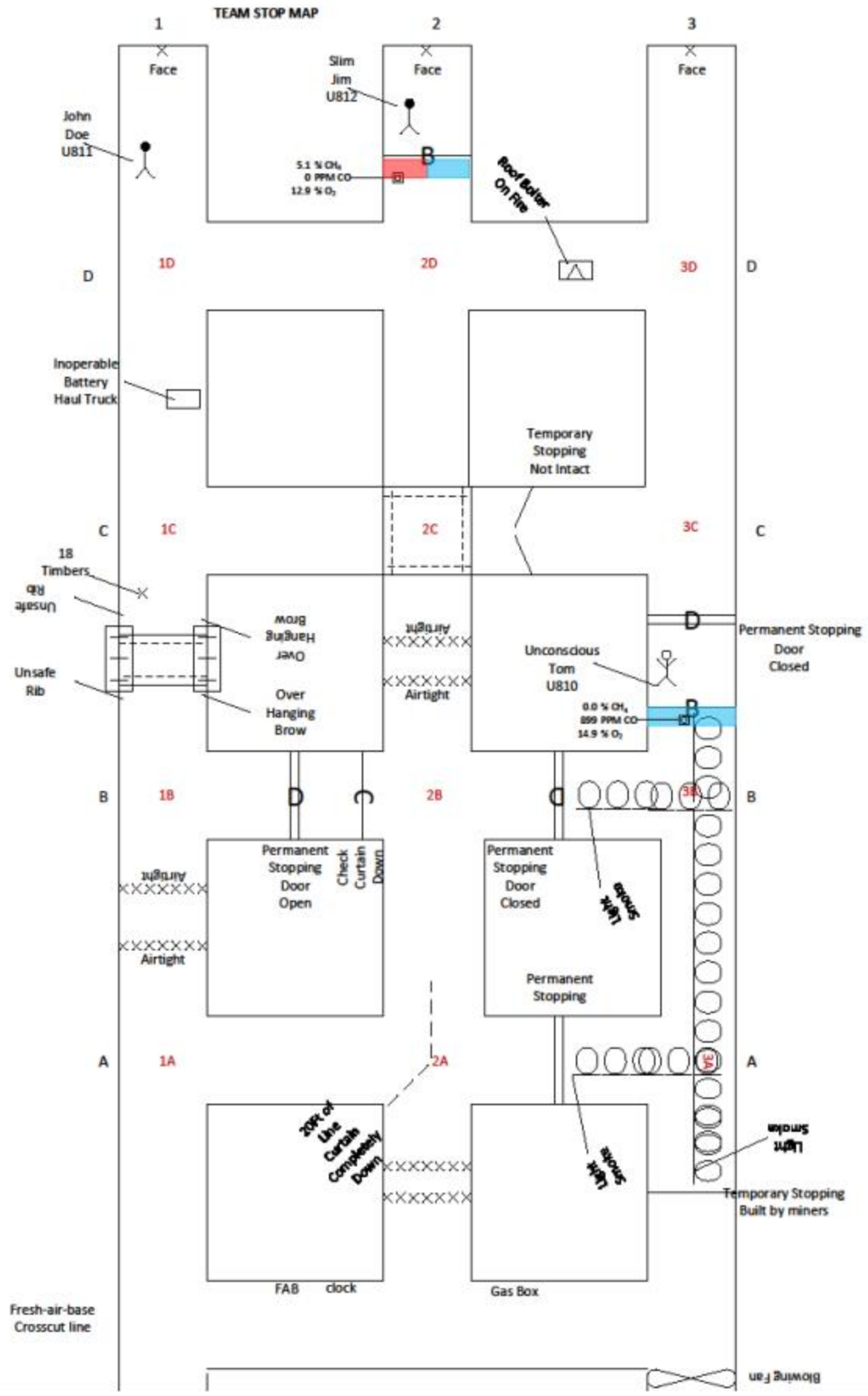
Team will come back through door in permanent stopping and close it and open team build and travel back to 2B intersection

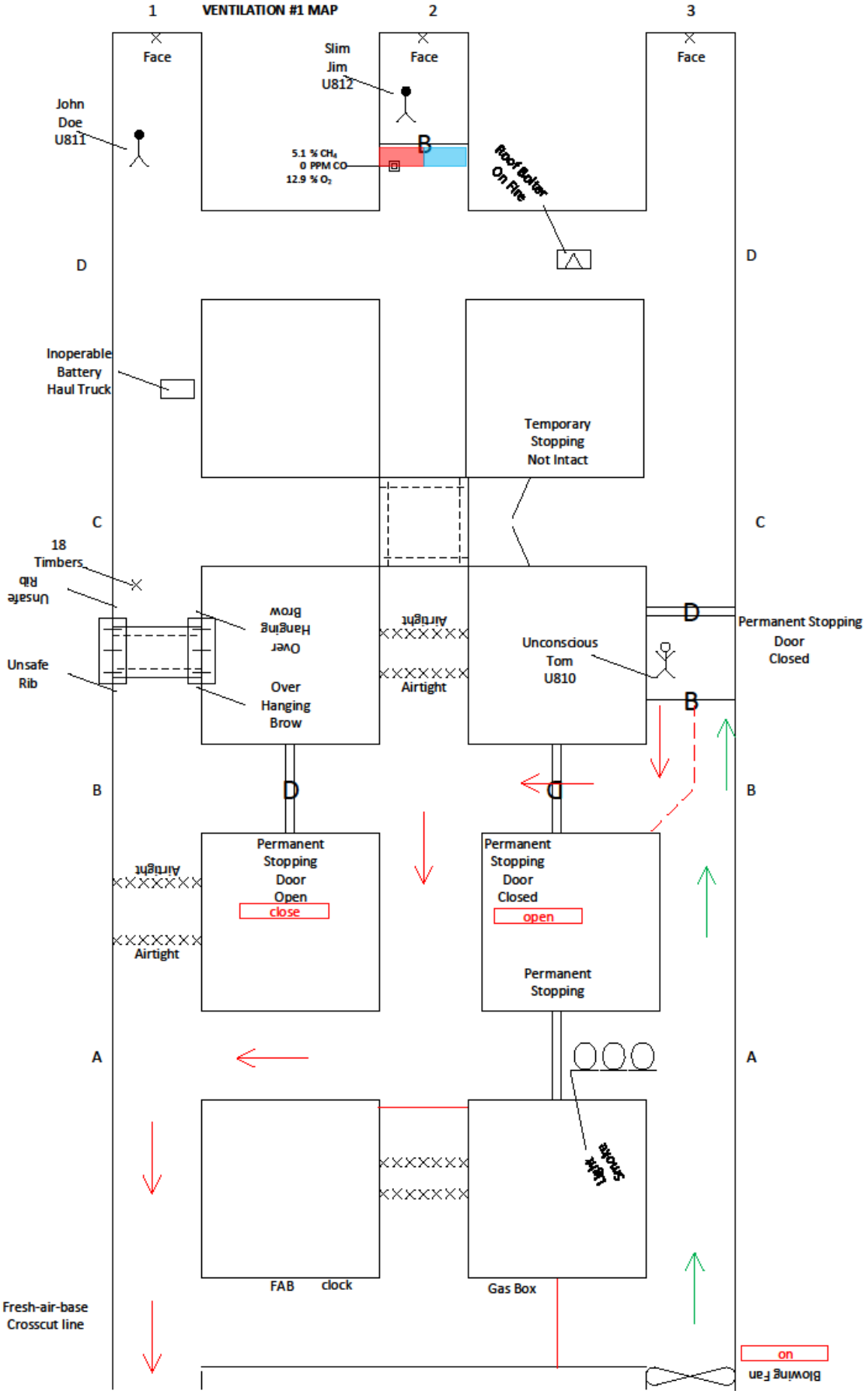
Intersection 2B-- J1-R8a the captain will indicate to the team he has recognized the bad ground in the #2 entry at the caved area. J1-R9—the captain must mark D & I's at the caved area

Team will travel on to intersection 1B

Intersection 1B---- J1-R8a the captain will indicate to the team he has recognized the bad ground in the #1 entry at the unsafe roof and bad ribs. J1-R9—the captain must mark D & I's at the unsafe roof.

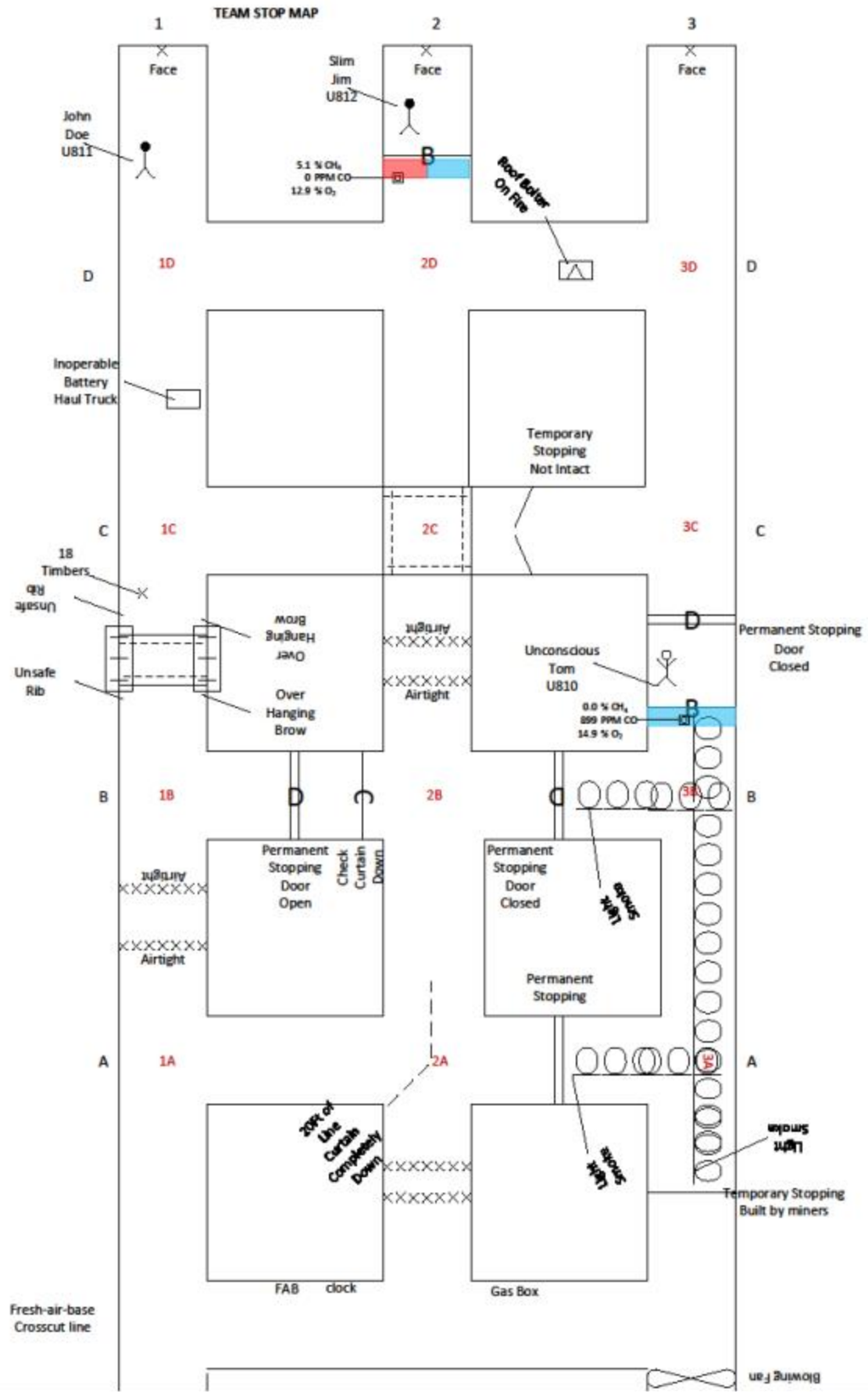
J1-R18a--The team must now ventilate because of the low oxygen reading 14.9% at the barricade in #3 entry and do not have timber to advance inby in the #1 entry **(see ventilation #1 on next page)**


TEAM STOP MAP
1
2
3
Face
Face
Face
Slim
Jim
U812
John
Doe
U811
5.1 % CH4
0 PPM CO
12.9 % O2
Roof Bolter
On Fire
D
1D
2D
3D
D
Inoperable
Battery
Haul Truck
Temporary
Stopping
Not Intact
C
1C
2C
3C
C
18
Timbers
Unsafe
Rib
Unsafe
Rib
Over
Hanging
Brow
Airtight
Permanent Stopping
Door
Closed
Unconscious
Tom
U810
0.0 % CH4
899 PPM CO
14.9 % O2
Over
Hanging
Brow
Airtight
B
1B
2B
3B
B
Permanent
Stopping
Door
Open
Check
Curtain
Down
Airtight
Airtight
Permanent
Stopping
Door
Closed
Light
Smoke
Permanent
Stopping
A
1A
2A
3A
A
20ft of
Line
Curtain
Completely
Down
Light
Smoke
Light
Smoke
Temporary Stopping
Built by miners
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
Blowing Fan


1
VENTILATION #1 MAP
2
3
Face
Face
Face
Slim
Jim
U812
John
Doe
U811
5.1 % CH4
0 PPM CO
12.9 % O2
B
Roof Bolter
On Fire
D
D
Inoperable
Battery
Haul Truck
Temporary
Stopping
Not Intact
C
C
18
Timbers
Unsafe
Rib
Over
Hanging
Brow
Airtight
Unconscious
Tom
U810
D
Permanent Stopping
Door
Closed
Unsafe
Rib
Over
Hanging
Brow
Airtight
B
B
D
D
Permanent
Stopping
Door
Open
close
Airtight
Airtight
Permanent
Stopping
Door
Closed
open
Permanent
Stopping
A
A
Light
Smoke
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
on
Blowing Fan

Ventilation #1-- mandoor between 1 and 2 in permanent stopping must be shut, mandoor in permanent stopping between 2 to 3 must be opened, stopping must be built in the #2 entry inby or outby the caved area, a stopping must be built in the FAB line either between 1 to 2 or 2 to 3, the team must take the 20ft of line curtain and hold it up to clear the low oxygen at barricade and have the superintendent start the fan. Before team build anyone of the temporary stoppings the roof or back has to check by the captain. J1-R8b3—the captain must indicate he is checking the back or roof before building the stoppings,

After fan is started the smoke in the #3 entry and smoke in 3 X-cut line should be cleared the smoke placard should be turned over and one of the smoke placard should be placed in the X-cut to show the smoke is still in x-cut over to the permanent stopping in #2 line. The low oxygen would also been cleared and should be turned over, J2-R1—a gas test is required after the ventilation changed has been made to see the effects of the change to area where toxic or dangerous gases where once at.


TEAM STOP MAP
1
2
3
Face
Face
Face
Slim
Jim
U812
John
Doe
U811
5.1 % CH4
0 PPM CO
12.9 % O2
Roof Bolter
On Fire
D
1D
2D
3D
D
Inoperable
Battery
Haul Truck
Temporary
Stopping
Not Intact
C
1C
2C
3C
C
18
Timbers
Unsafe
Rib
Unsafe
Rib
Over
Hanging
Brow
Airtight
Permanent Stopping
Door
Closed
Unconscious
Tom
U810
0.0 % CH4
899 PPM CO
14.9 % O2
Over
Hanging
Brow
Airtight
B
1B
2B
3B
B
Permanent
Stopping
Door
Open
Check
Curtain
Down
Airtight
Airtight
Permanent
Stopping
Door
Closed
Light
Smoke
Permanent
Stopping
A
1A
2A
3A
A
20ft of
Line
Curtain
Completely
Down
Light
Smoke
Light
Smoke
Temporary Stopping
Built by miners
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
Blowing Fan

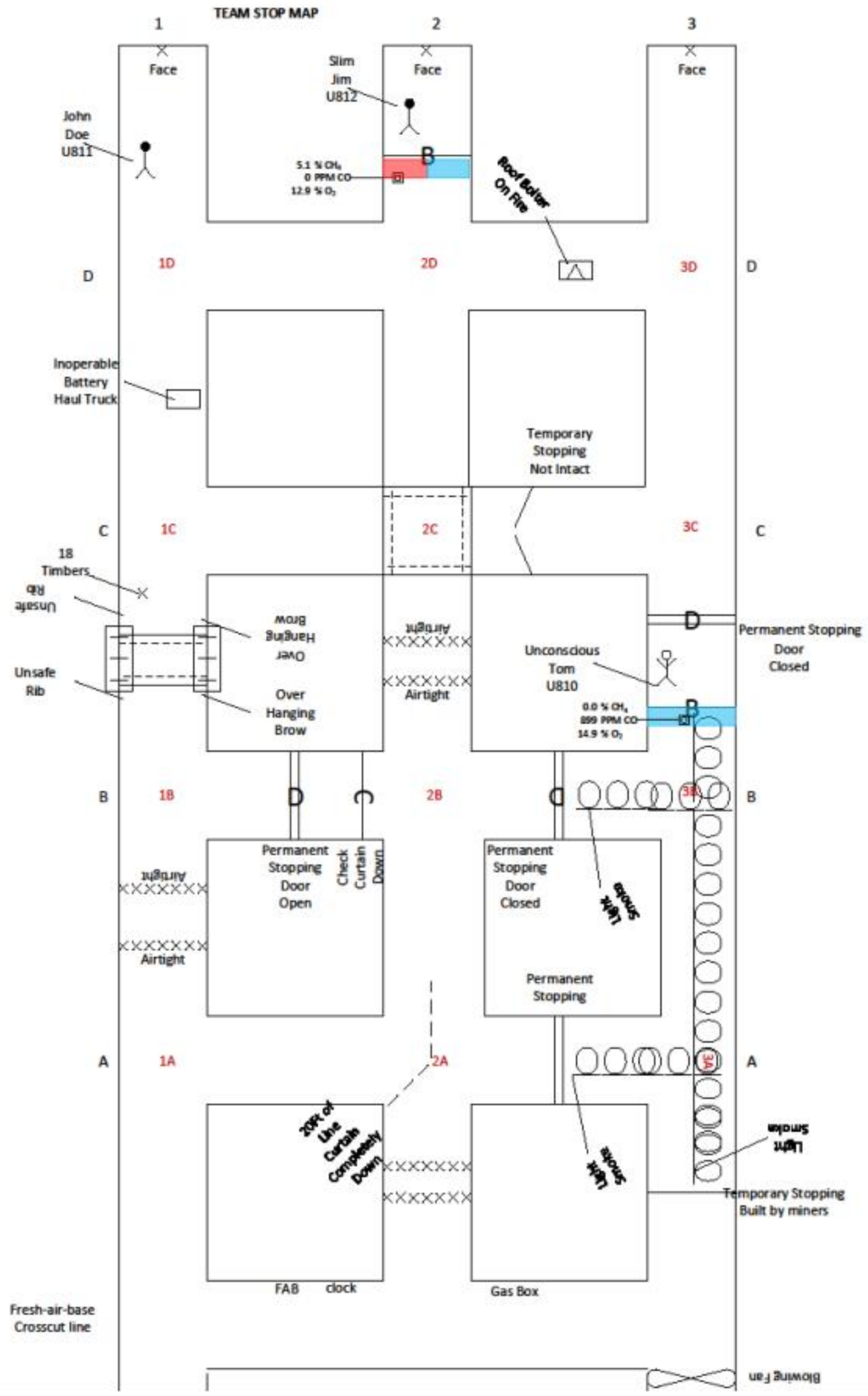
The team must request for the fan to be stopped before it is stopped if not the fan will continue to run and could move gasses inby if 2 or more paths are given. To airlock into the barricade the team must retrieve one of the stopping they had built to direct the air with. Remember all permanent stoppings cannot be removed from their location.

The team is now ready to airlock into the barricade, Prior to building the airlock, J1-R8b3—the captain must indicate he is checking the back or roof before building the stopping, J2-R11—the team must hook both sides of the building material to be airtight. The barricade can now be breached, J1-R8b4-the captain must verbally indicate he is checking the back or roof before advance through the breached barricade, J2-R1-a gas test is required where barricade had been breached. The team is now in visual contact with the unconscious person and must treat him. J1-R10a5-team member that will treat or touch the patient must use (BSI), J2-R14a-The team will do their assessment of the patient, after completion of assessment, #1 judge will reach the team the placard stating the patient is only unconscious that will also have his name on it and his tag number. J2-R15-The team will have to put a apparatus on the unconscious patient having a full face-piece. J2-R13 –the patient must be secured to stretcher by at least two bandages or straps, one around trunk of body and one around legs, covered with blanket, and placed so as not to crimp air hoses. (Hands of the unconscious person must be secured). J1-R9-the captain must place DTI at the location of the unconscious person. The captain can make the stopping while the team is loading the person on the stretcher, J1-R9 DTI at the stopping. J2-R1-A gas test be made at the stopping. The patient is now ready to be taken to the fresh-air –base.

The team returns to 3B intersection and will be advancing to 3C intersection but first the team must build the barricade back. J1-R8b3-the captain must verbally indicate he is checking the back or roof. The control is now built. The captain will open the mandoor in the permanent stopping. J1-Rb4- the captain must verbally indicate he is checking the back or roof; J2-R1-the captain must take a gas test where door has been opened. The team will now advance to Stop #7

Team Stop #7-3C intersection-. J1-R8b1—the captain will break all planes to the intersection and enter each opening and verbally indicate he is checking the back or roof. J1-R8a the captain will indicate to the team he has recognized the bad ground at the plane leading into 2C intersection.. J1-R9—the captain must mark D & I's at the unsafe roof. J2-R1—gas test will be made in the inby opening to the intersection in the heading and a gas will be made in the X-cut.

The team will now advance to stop #8


TEAM STOP MAP
1
2
3
Face
Face
Face
Slim
Jim
U812
John
Doe
U811
5.1 % CH4
0 PPM CO
12.9 % O2
Roof Bolter
On Fire
D
1D
2D
3D
D
Inoperable
Battery
Haul Truck
Temporary
Stopping
Not Intact
C
1C
2C
3C
C
18
Timbers
Unsafe
Rib
Unsafe
Rib
Over
Hanging
Brow
Airtight
Permanent Stopping
Door
Closed
Unconscious
Tom
U810
0.0 % CH4
899 PPM CO
14.9 % O2
Over
Hanging
Brow
Airtight
B
1B
2B
3B
B
Permanent
Stopping
Door
Open
Check
Curtain
Down
Airtight
Airtight
Permanent
Stopping
Door
Closed
Light
Smoke
Permanent
Stopping
A
1A
2A
3A
A
20ft of
Line
Curtain
Completely
Down
Light
Smoke
Light
Smoke
Temporary Stopping
Built by miners
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
Blowing Fan

Team Stop #8-3D intersection-- J1-R11—No team member can advance more than 3 feet beyond the intersection into the #3 entry at this time, J1-R8b1—the captain will break all planes to the intersection and enter each opening and verbally indicate he is checking the back or roof. J1-R8b5-The captain must immediately verbally indicate he is checking the back or roof at the location of the fire. J1-R8a- each time the team comes back to the fire area the captain or the rear captain on retreat must indicate to the team he has recognized bad ground before any team member passes the placard. J1-R13—the team without undue delay must extinguish the fire.

The team will advance to 2D

Team Stop #9—3D intersection--J1-R11—No team member can advance more than 3 feet beyond the intersection into the #2 entry at this time, J1-R8b1—the captain will break all planes to the intersection and enter each opening and verbally indicate he is checking the back or roof, . J1-R8a the captain will indicate to the team he has recognized the bad ground at the plane leading into 2C intersection. J1-R9—the captain must mark D & I's at the unsafe roof. J2-R1—gas test will be made in all openings to the intersection.

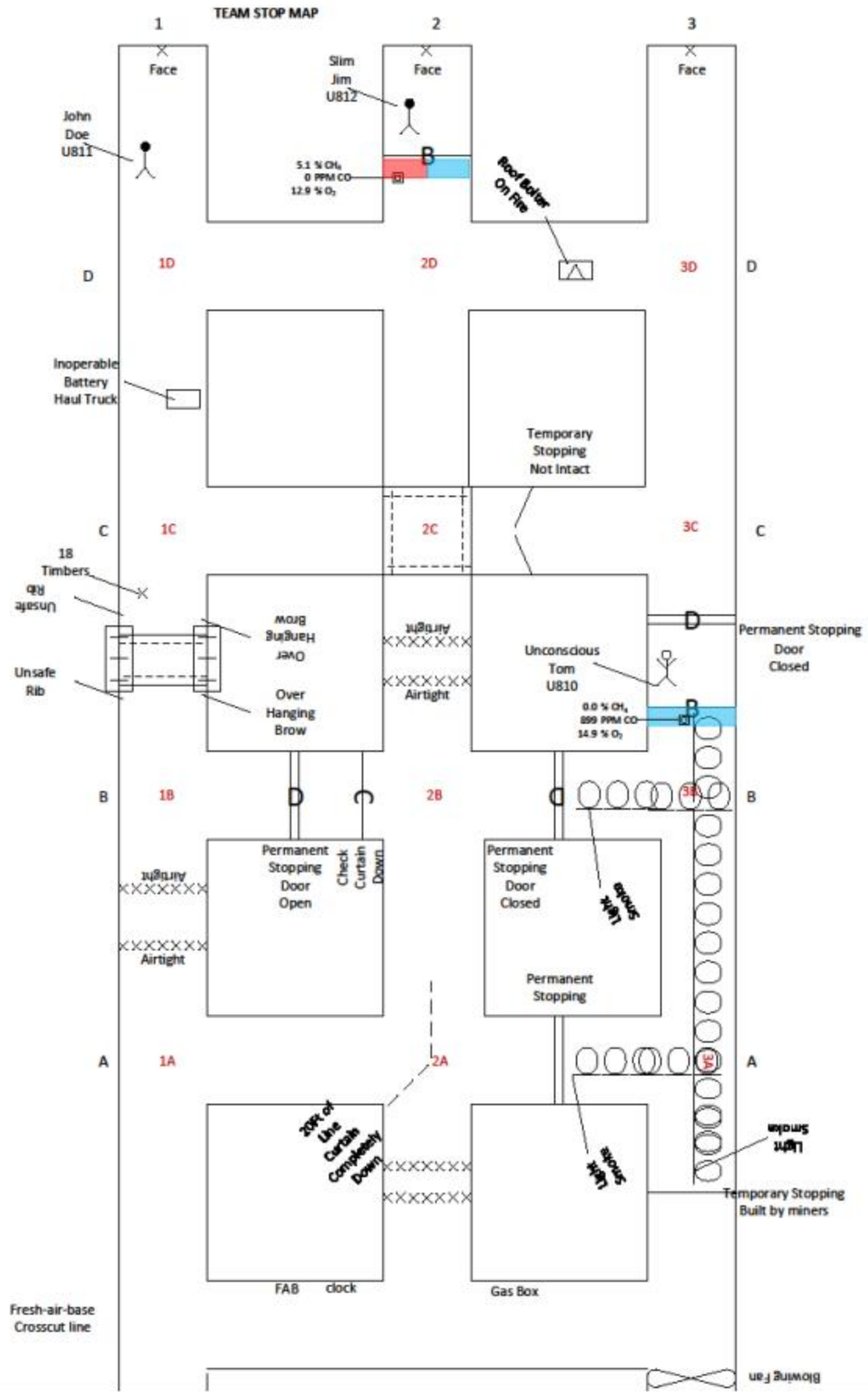
The team will now advance to 1D

Team Stop #10—1D intersection----J1-R11—No team member can advance more than 3 feet beyond the intersection into the #2 entry at this time, J1-R8b.2—the captain will break all planes to the intersection and enter each opening and verbally indicate he is checking the back or roof, J2-R1—gas test will be made in all openings to the intersection.

The team will now advance to 1C

Team Stop #11—1C intersection---. J1-R8b1—the captain will break all planes to the intersection and enter each opening and verbally indicate he is checking the back or roof. J1-R8a the captain will indicate to the team he has recognized the bad ground at the plane leading into 2C intersection and the bad ground (unsafe roof/and unsafe rib/over- hanging brow) in the entry. J1-R9—the captain must mark D & I's at both unsafe roofs areas. J2-R1—gas tests will be made in the x-cut opening and the heading and opening outby the intersection.

The team may elect to timber at this time or may return to make all accessible areas inby 1D, 2D, and 3D intersections. Page 19 of the general rule, Competition Problem states inaccessible areas **only** need to be explored when there are unaccounted for or if an explosive air/gas mixture will be moved through the unexplored areas. Teams may be required pump water or set timbers to explore inaccessible areas. **If this is necessary,** appropriate materials will be provided in the problem.


TEAM STOP MAP
1
2
3
Face
Face
Face
Slim
Jim
U812
John
Doe
U811
5.1 % CH4
0 PPM CO
12.9 % O2
Roof Bolter
On Fire
D
1D
2D
3D
D
Inoperable
Battery
Haul Truck
Temporary
Stopping
Not Intact
C
1C
2C
3C
C
18
Timbers
Unsafe
Rib
Unsafe
Rib
Over
Hanging
Brow
Airtight
Permanent Stopping
Door
Closed
Unconscious
Tom
U810
0.0 % CH4
899 PPM CO
14.9 % O2
Over
Hanging
Brow
Airtight
B
1B
2B
3B
B
Permanent
Stopping
Door
Open
Check
Curtain
Down
Airtight
Airtight
Permanent
Stopping
Door
Closed
Light
Smoke
Permanent
Stopping
A
1A
2A
3A
A
20ft of
Line
Curtain
Completely
Down
Light
Smoke
Light
Smoke
Temporary Stopping
Built by miners
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
Blowing Fan

The Team has elected to retreat to 1D intersection, J1-R8b1—the captain will break the plane leading into the face area of number 1 and will verbally indicate he is checking the back or roof, The team will make visual contact with the miner, J1-R10a5-team members that will treat or touch the patient must use (BSI), J2-R14a-The team will do their assessment of the patient, after completion of assessment, #1 judge will reach the team the placard stating the patient is a body and his name will be on placard with his miners ID number. J1-R9-the captain must place DTI at the location of the body; the captain will advance on to the face of #1, J1-R8b1—the captain will verbally indicate he is checking the back or roof at the face, J1-R9-the captain must place DTI at the location of the face, J2-R1 a gas test must be made at the face,

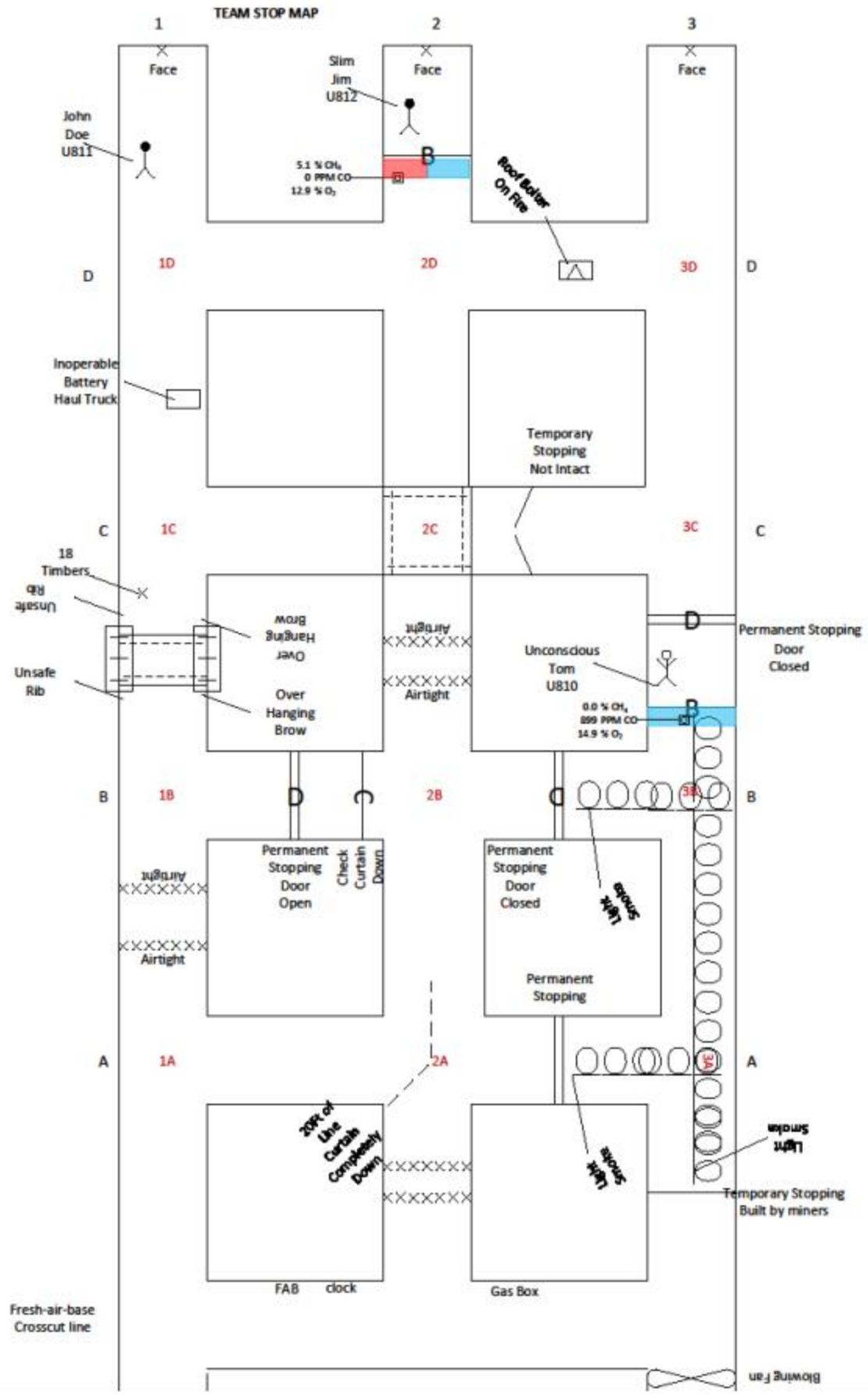
The team will now retreat back to 2D intersection, J1-R8b1—the captain will break the plane leading into the face area of number 2 and will verbally indicate he is checking the back or roof, The captain will find the explosive air gas mixture of 5.1% Ch4 and 12.9% O2, J1-R14—the team must notify the fresh-air-base they have found a air/gas mixture in explosive range. The captain will make it to the barricade; there will be no response from the barricade when the team knocks on it. J1-R18a- the team cannot breach the barricade with the toxic gas 12.9% oxygen located up against the barricade. J1-R9-the captain must place D&I's at the location of the barricade.

The team will travel to 3D intersection, J1-R8a- each time the team comes back to the fire area the captain or the rear captain on retreat must indicate to the team he has recognized bad ground before any team member passes the placard.

3D intersection-- J1-R8b1—the captain will break the plane leading into the face area of number 3 and will verbally indicate he is checking the back or roof, the captain will make it to the face area, J1-R8b1—the captain will verbally indicate he is checking the back or roof at the face, J1-R9-the captain must place DTI at the location of the face, J2-R1 a gas test must be made at the face,

The team now has to find a way to ventilate the barricade in #2 face area, Remember each time the team passes the fire area while advancing or retreating, J1-R8a- each time the team comes back to the fire area the captain or the rear captain on retreat must indicate to the team he has recognized bad ground before any team member passes the placard.

The team must timber through the intersection of 2C, the timbers shall be set 2 by 2 with 2 starting in good roof 1 foot from the bad roof on a maximum of 5 foot centers and next 2 by 2 roll in bad room on no more than 5ft centers a minimum of 8 timbers will be set to properly make the area to vent thru, the team will have the choice which direction they choose to enter the 2C intersection to set the timbers, if the team elects to travel to the 2C from the inby side to set the timbers when the captains set the last timber on the outside of the 2C intersection he must, -- J1-R8b1-the captain will verbally indicate he is checking the back or roof, . J1-R8a the captain will indicate to the team he has recognized the bad ground (backside of the caved airtight area), J1-R9-the captain must place DTI at the location of the caved area, J2-R1 a gas test must be made in this area, if the team does not timber down the entry but elects to timber across the area, the outby will not have to made to complete the problem due to the


TEAM STOP MAP
1
2
3
Face
Face
Face
Slim
Jim
U812
John
Doe
U811
5.1 % CH4
0 PPM CO
12.9 % O2
Roof Bolter
On Fire
D
1D
2D
3D
D
Inoperable
Battery
Haul Truck
Temporary
Stopping
Not Intact
C
1C
2C
3C
C
18
Timbers
Unsafe
Rib
Unsafe
Rib
Over
Hanging
Brow
Airtight
Permanent Stopping
Door
Closed
Unconscious
Tom
U810
0.0 % CH4
899 PPM CO
14.9 % O2
Over
Hanging
Brow
Airtight
B
1B
2B
3B
B
Permanent
Stopping
Door
Open
Check
Curtain
Down
Airtight
Airtight
Permanent
Stopping
Door
Closed
Light
Smoke
Permanent
Stopping
A
1A
2A
3A
A
20ft of
Line
Curtain
Completely
Down
Light
Smoke
Light
Smoke
Temporary Stopping
Built by miners
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
Blowing Fan

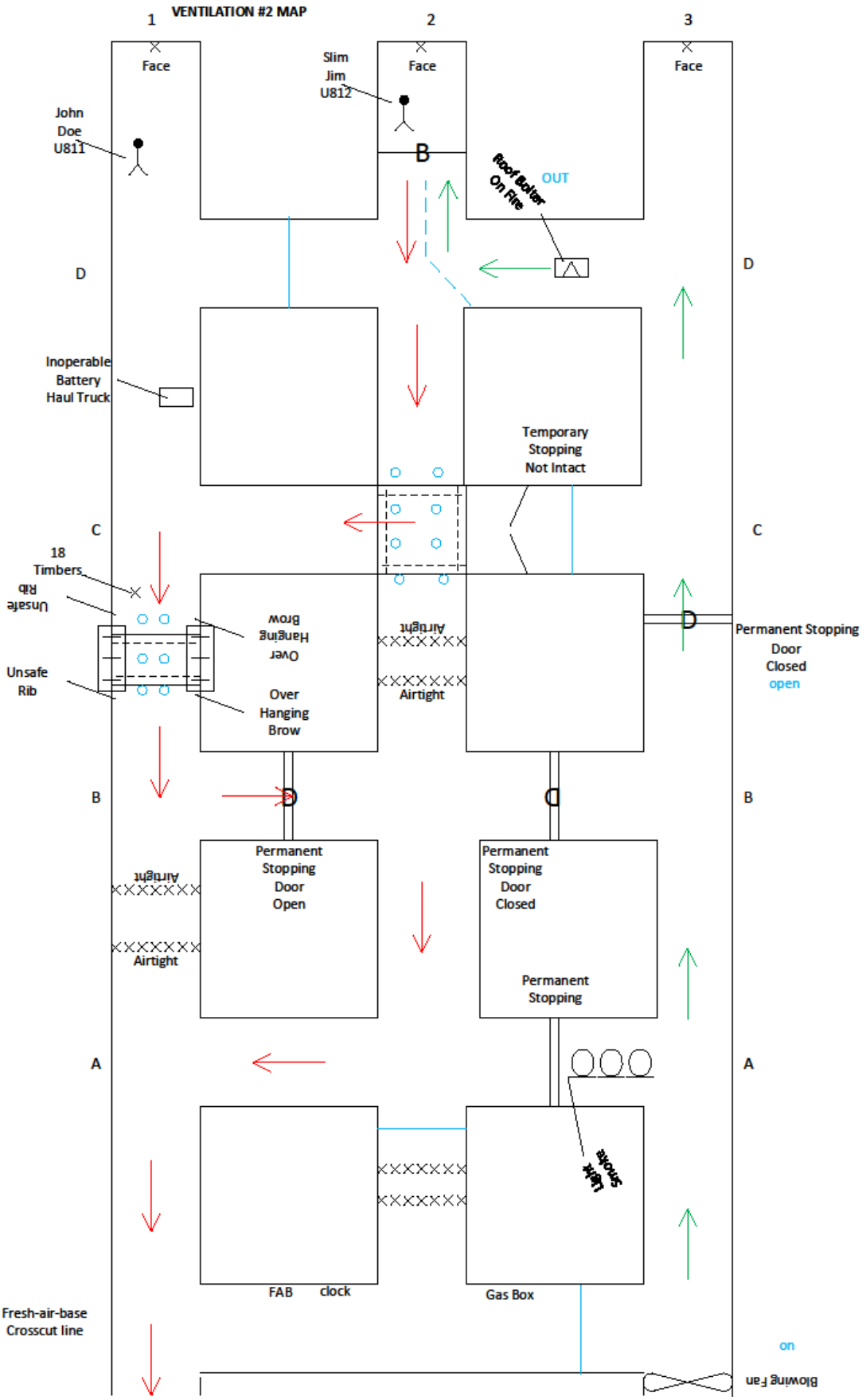
area would still be consider as an inaccessible area and once the person behind the #2 barricade has been found this would be a danger to the team just to make.

The team will now timber through the unsafe roof area in #1entry with the overhanging brow rib and unsafe rib the team must use 2 X 2 pattern of timbers setting the first roll 1ft from the bad roof and setting the next 2 X 2 roll in the unsafe roof area staying away from the two rib conditions and setting the last roll in the good roof on the other side. **(see Ventilation Map #2 on next page)**

The team is now ready to airlock into the barricade, Prior to building the airlock, J1-R8b3—the captain must indicate he is checking the back or roof before building the stopping, J2-R11—the team must hook both sides of the building material to be airtight. The barricade can now be breached, J1-R8b4-the captain must verbally indicate he is checking the back or roof before advance through the breached barricade, J2-R1-a gas test is required where barricade had been breached. The team is now in visual contact with the person. J1-R10a5-team members that will treat or touch the patient must use (BSI), J2-R14a-The team will do their assessment of the patient, after completion of assessment, #1 judge will reach the team the placard stating the patient is a body his name will be on the placard with his tag number. J1-R9-the captain must place DTI at the location of the body. ; the captain will advance on to the face of #2, J1-R8b1—the captain will verbally indicate he is checking the back or roof at the face, J1-R9-the captain must place DTI at the location of the face, J2-R1 a gas test must be made at the face

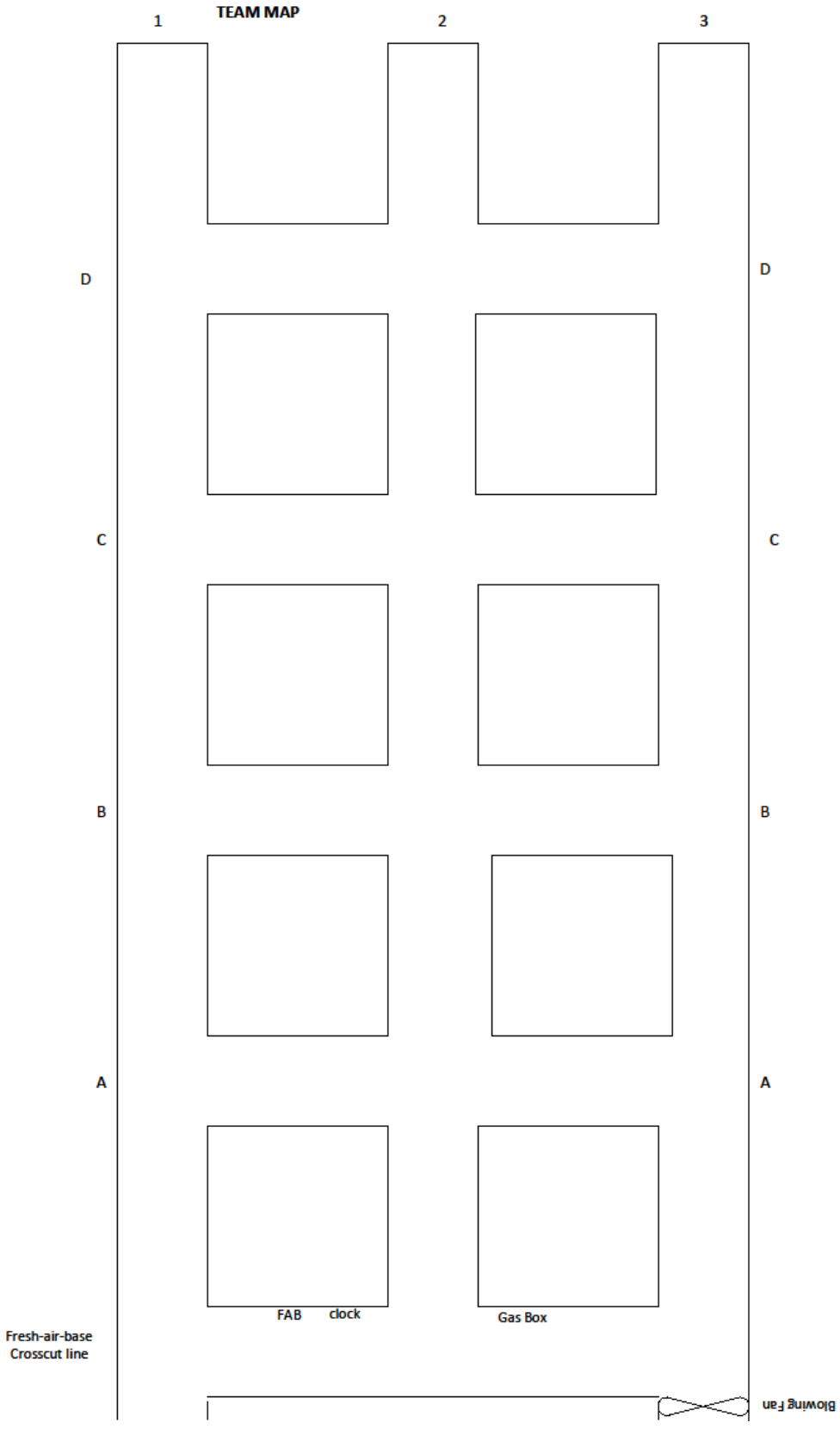
The team is ready to exit the mine make sure when pasting fire area test is made, if fan is still running the team must request changes each time a control is opened while retreated, or an airlock must be built when opening J2-R10 the team reaches the fresh-air-base before stopping the clock J1-R10 the team must count off ,

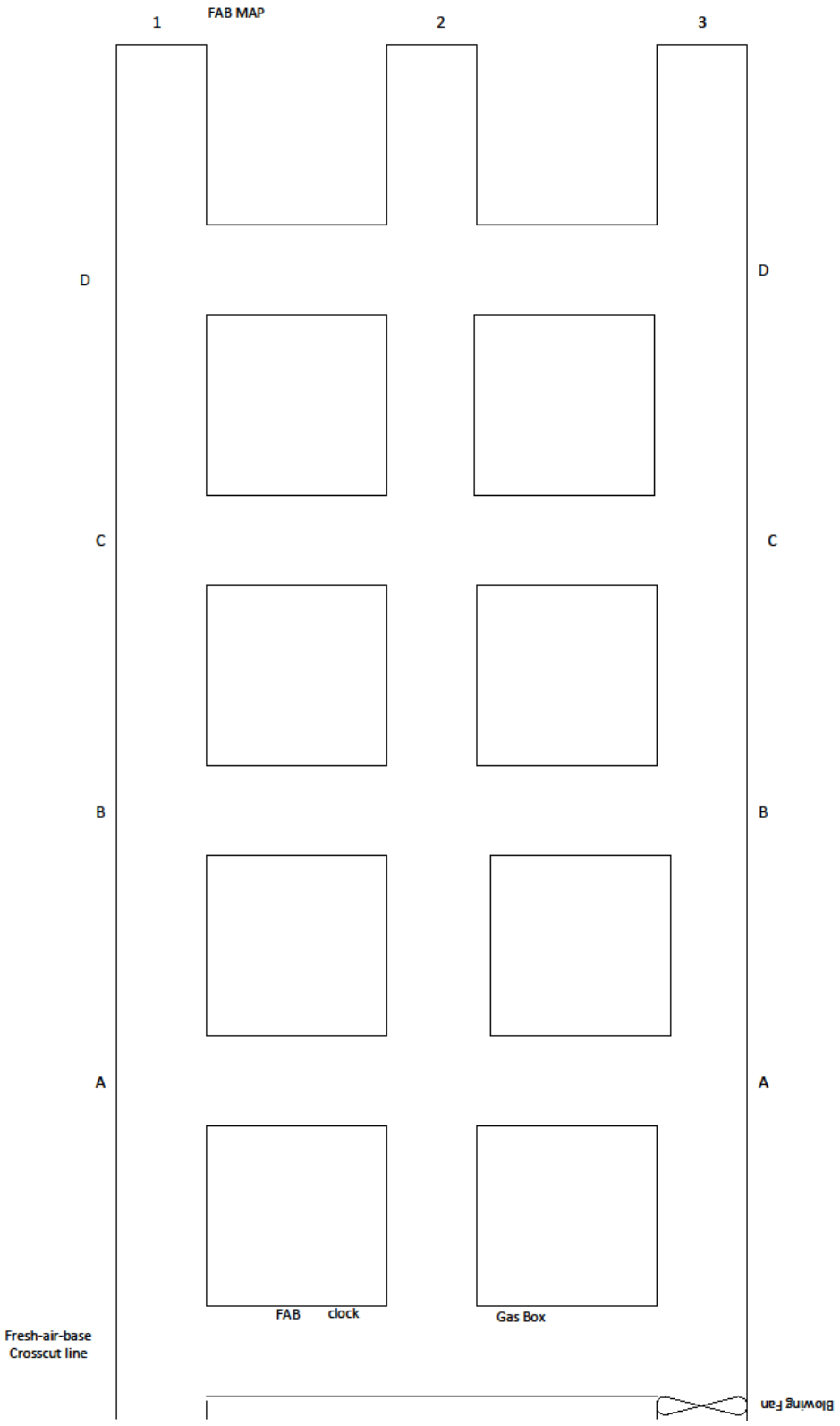
The clock has been stopped all maps work must stop and be taken from the team.


VENTILATION #2 MAP
1
2
3
Face
Face
Face
Slim
Jim
U812
John
Doe
U811
B
OUT
Roof Bolter
On Fire
D
D
Inoperable
Battery
Haul Truck
Temporary
Stopping
Not Intact
C
C
18
Timbers
Unsafe
Rib
Over
Hanging
Brow
Airtight
Permanent Stopping
Door
Closed
open
Unsafe
Rib
Over
Hanging
Brow
Airtight
B
B
Permanent
Stopping
Door
Open
Permanent
Stopping
Door
Closed
Airtight
Airtight
Permanent
Stopping
A
A
Light
Smoke
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
on
Blowing Fan

Ventilation #2

Now the team must establish their air path to the barricade before they have the fan started, a stoppin must either be built in D line in the X-cut between #1 and #2 entries or in #1 entry between C line and D line to keep from putting the explosive air/mixture over the battery haul truck that cannot be moved, J1 R10b3-changing conditions of the mine ventilation system in such a manner that and explosive mixture is moved over an ignition source. The temporary stopping in 3C x-cut will be built; J1-R8b3-the captain must verbally indicate he is checking the back or roof before the control can be built. And the door in the permanent stopping in #3 entry will be opened, the door in permanent stopping 3B to 2B x-cut will be shut the door in permanent stopping 1B to 2B will be opened, the team must build a stopping either one side or the other to protect the caved area between fresh-air-base line and 2A intersection, or J1-R10b3- the explosive mixture will travel through the unexplored area. The team can build stoppings in the fresh-air-base line on both sides of the #2 intersection and this will allow the ventilating air to trave up #3 and on the way back out the air will not pass through the caved area also, remember, J1-R8b3-th captain must verbally indicate he is checking the back or roof before the controls can be built. After air path has been established the team will travel back to the barricade and hold up the line curtain remember the fire area if pasted. J2-R12 The team must ask for the fan to be started, the fan will be started with the line curtain up an air path establish the air/gas mixture will exit the mine, J2-R1 a gas test must be made at the barricade area after the vent change. The team must request the fan to be turned back off if not the fan will remain on. The team can retrieve a temporary stopping to build to go into the barricade if fan is still on it will not hurt anything only area having anything left is the smoke between 2A to 3A behind permanent stopping but J2-R12 has to be complied with the team still will have to inform the official in charge of the vent change causing by this, this will allow air to follow in a different air path.


TEAM MAP
1
2
3
D
D
C
C
B
B
A
A
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
blowing Fan


FAB MAP
1
2
3
D
D
C
C
B
B
A
A
FAB
clock
Gas Box
Fresh-air-base
Crosscut line
Blowing Fan