

2019

ALABAMA MINE RESCUE CONTEST



DAY 1



BEVILL STATE
COMMUNITY COLLEGE

2019 ALABAMA MINE RESCUE CONTEST

DAY 1 TEAM STATEMENT

Thank you for coming to our assistance. You are located at the mouth of the southwest panel of the Roll Tide Mine No. 1. This mine has a history of high methane levels and bad roof. We are in the process of establishing a new set of intake entries that was previously return air entries going to the main return. Temporary stoppings have been installed to prevent any ventilation changes during the rehabilitation work. Without these temporary controls, ventilation would short circuit into the main return inby the panel.

The day shift rehabilitation crew entered the mine to support some poor roof and do some clean-up work to allow installation of ventilation controls so we can prepare for the ventilation changes over the weekend. Three hours ago the 001 section called out and said they felt the ground shake and had the ventilation on the section interrupted. The mine was immediately evacuated but we could not make contact with the 10 man rehab crew.

Rescue teams have explored up to this point and a fresh air base has been established at this location. The temporary stoppings located just inby the fresh air base were repaired and are intact and the ventilation is short circuited at the fresh air base.

The mine map is up-to-date. A backup mine rescue team is on standby. State and Federal agencies are in the command center and in communication with the briefing officer and command center attendant.

The exhausting fan cannot be reversed, stalled or turned off.

You can begin when you are ready. Good luck and be safe!

PROBLEM

**ACCOUNT FOR ALL MISSING
MINERS AND BRING SURVIVORS
TO THE F.A.B.**

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

**TEAMS CAN ONLY CARRY TWO
SETS OF BRATTICE CLOTH WHILE
ADVANCING OR RETREATING**

**YOU HAVE 70 MINUTES TO
COMPLETE THE PROBLEM**

Patient #1 Statement

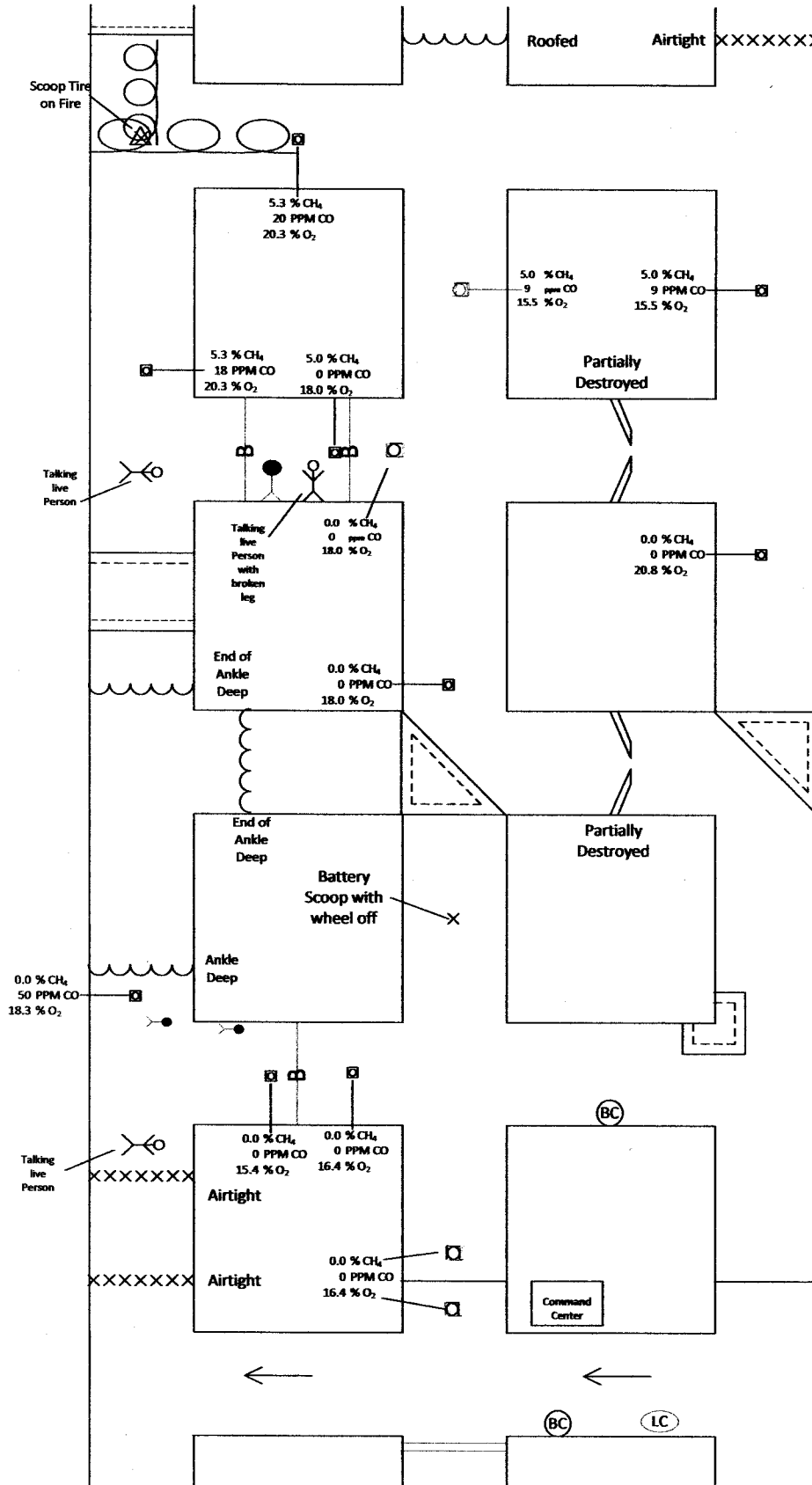
**Help Me! I am
having trouble
breathing.**

Patient #2 Statement

**Help Me! I am OK
except I have a
broken leg, but my
buddy needs help.
He isn't breathing.**

Patient #3 Statement

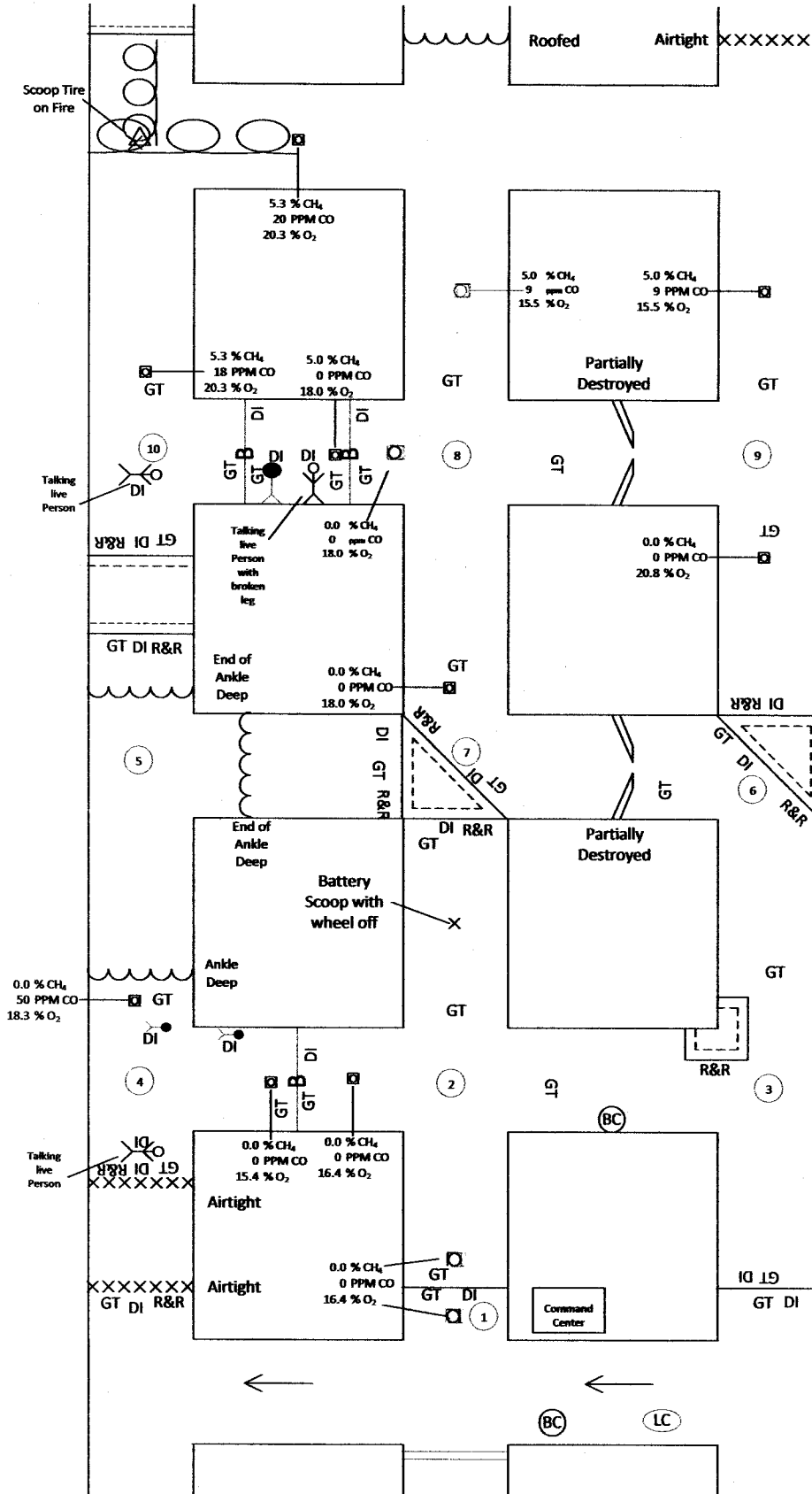
**Help Me! My light is
out and it is getting
hard to breath.**



Scale: 1"=10'

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Team Stops



Scale: 1"=10'

TEAM EXPLORATION

TEAM STOP #1

The team will check all 3 openings but can only check only up to the temporary stoppings in entries 2 & 3 and caved airtight in No. 1 entry. The team will enter No. 2 or 3 by air locking due to contaminant in No. 2 entry. The team should make their 50 foot apparatus check at the first location the team airlocks into the mine. If they enter No. 2 entry they will immediately find a gas card that indicates a contaminant just inby after air locking. The Captain will conduct a gas test immediately after breaching the airlock and before any of his team enters.

TEAM STOP #2

The team will travel up the No. 2 into the first intersection. The team will find a barricade between 1 & 2 with a person talking (see patient statement #1). The captain will D&I the barricade. Also they will find an irrespirable gas in front of the barricade. The opening between 2 & 3 is clear. Gas tests will be taken in front of the barricade and in the No. 2 entry inby and in the right crosscut. An inoperative scoop is located inby the intersection in No. 2 entry. The captain will find an unsafe roof inby in the No. 2 entry and will perform a roof and rib, and put D& I at the location.

TEAM STOP #2

If the team choses to enter via the No. 3 entry, they will airlock as mentioned in "Team Stop #1". They will advance into the first intersection in No. 3. The Captain will do a roof and rib test of the entire intersection due to the unsafe roof on the inby corner. Gas test will be taken in the No. 3 entry inby the opening and in the crosscut to the left.

TEAM STOP #3

The team will travel across to either No. 3 or No. 2 entry depending on which entry they originally entered. Once they have tied across and behind, the team now has the information needed to ventilate the barricade. If the team advances inby the first row of crosscut they have delayed removing the patient (See VENTILATION # 1)

Ventilation #1

Judges need to stay aware that if any of the ventilation controls are taken down allowing air to move before temporary stoppings are installed inby the first crosscut in No. 2 and 3 entries the ventilation will immediately travel inby and cause an explosion.

TEAM STOP #4

Once the team has cleared the gas in front of the barricade, the team will airlock into the barricade. The Captain will take a gas test before anyone enters the area. The captain will find an irrespirable gas just inby the barricade. When they enter, the captain will find a body on the inby rib. He will put D&I at the body. He will then either find the second body inby the entry and D&I that location or will go to the patient which is located in good air just outby the intersection. The team will have to put the patient under oxygen before moving him into the intersection. The Captain will D&I that location. The captain will do a roof and rib test at the same location for the caved airtight. Gas test will be taken inby the intersection and outby at the caved airtight. The team will take the live person to the FAB by airlocking back out of the barricade.

TEAM STOP #5

The team will advance back to the barricade and airlock back into the No. 1 entry and travel up to the next intersection since they found a contaminant in the No. 1 entry at team stop #4. At that intersection they will find unsafe roof inby the intersection and unsafe roof in the crosscut to the right. The Captain will D&I the both unsafe roofs along with doing a R&R test at each. Gas test will be taken at each unsafe roof location also.

TEAM STOP #6

The team will retreat back and airlock back out of the barricade and advance up the No. 3 entry to the 2nd crosscut. The captain will do a R&R test of the entire intersection due to the diagonal unsafe roof in the intersection. The captain will D&I the unsafe roof and the permanent stopping partially destroyed in the crosscut. Gas test will be taken in the crosscut and at the unsafe roof.

TEAM STOP #7

The team will advance over to the No. 2 entry and will find unsafe roof and will do a R&R test of the entire intersection. The captain will D&I the unsafe roof. Gas test will be taken at the unsafe roof and in the No. 2 entry inby the intersection.

TEAM STOP #8

The team will advance in the No. 2 entry to the 3rd intersection. The captain will find a barricade in the crosscut to the left with an irrespirable gas in front of it. He will find a permanent stopping partially destroyed in the right crosscut. The captain will D&I the barricade and the permanent stopping partially destroyed. Gas test will be taken inby the intersection and in the right crosscut along with one at the barricade. When checking the barricade the person behind it will be talking (see patient statement #2) and this will tie the team to this barricade. They do not have enough information to ventilate so they will continue to explore.

TEAM STOP #9

The team will tie across and back in the No. 3 entry. They will find an irrespirable gas outby in the No. 3 entry. Gas test will be taken inby and outby the intersection. At this point the team has enough information to ventilate the barricade (SEE VENTILATION #2). The team should never advance inby this point or they will have broken procedure since they do have the ability to ventilate the barricade.

Ventilation #2

Again, judges need to be aware that temporary stoppings must be built inby the 3rd intersection in No. 2 & 3 along with a temporary stopping being built in the 2nd crosscut between No. 1 and 2 entries (or in No. 1 entry just outby the unsafe roof located inby the 2nd intersection. If these are not in place first, it will allow the air flow to go inby once the temporary stoppings are taken down outby. This will cause an explosion.

When the team completes ventilation No. 2, the team will airlock into the barricade and the captain will take a gas test before anyone can enter. He will find the gas card that has an explosive range of CH₄. He will find the live person with a broken leg. The captain will also find a body next to the live person. The captain will find another barricade and will find a live person talking (see patient statement #3). At this point the captain will D&I the live person, body and barricade. A gas test will be taken at the barricade. The team will then take the live person to the FAB.

TEAM STOP #10

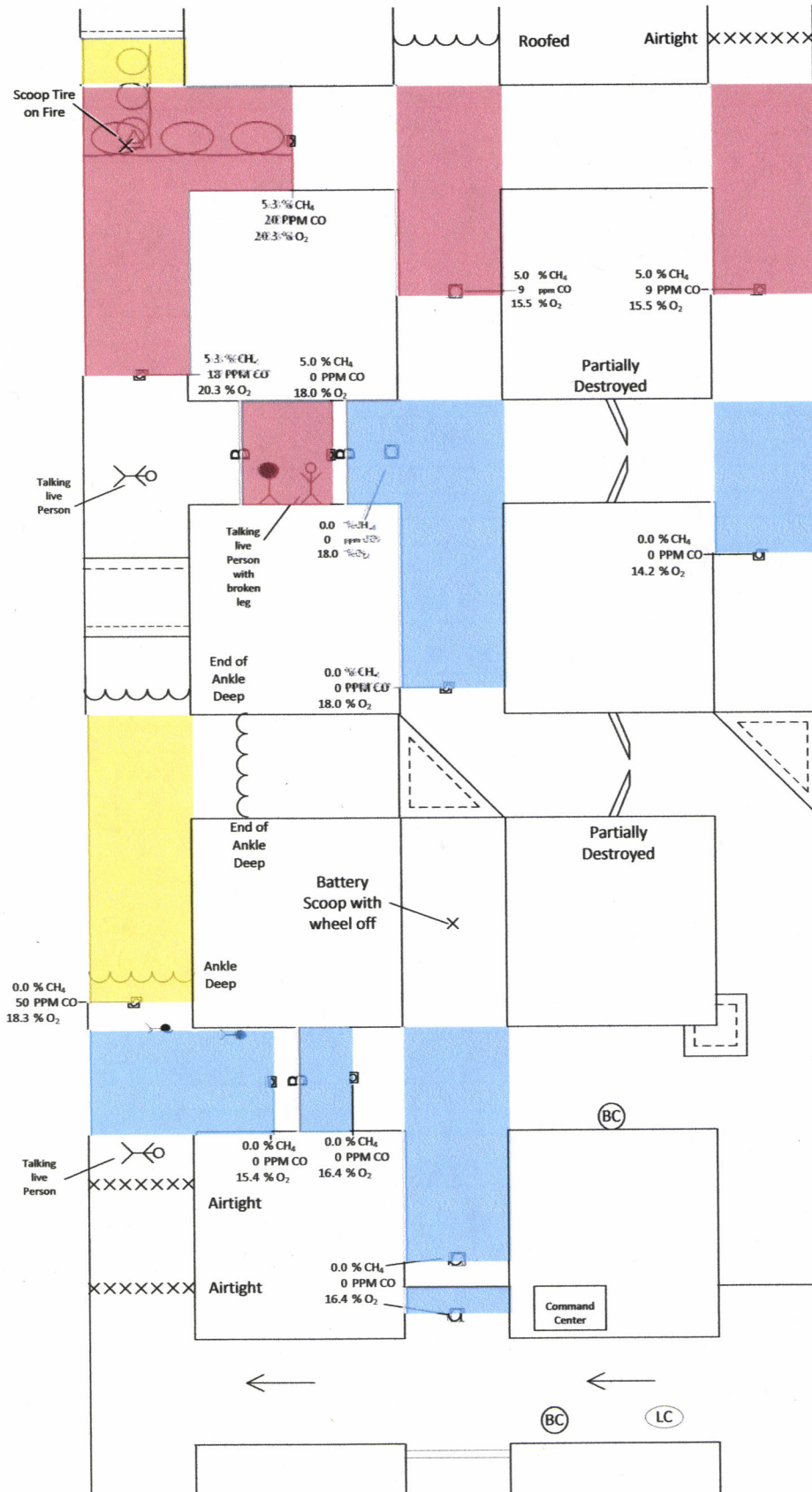
The team will advance back to the barricade and will ventilate barricade No. 3 (SEE VENTILATION #.3). The team will airlock into the barricade and the captain will take a gas test inby before anyone enters. The captain will find patient No. 3 in the intersection. He will find an unsafe roof outby and find a gas card that will indicate an immanent explosion is possible. The captain will D&I the unsafe roof and the live person's location. Gas test will be taken at the unsafe roof and at the inby opening close to where the gas card is located. The captain will FPA that location and the team will airlock back out of the barricade and return to the FAB and take required gas test as they travel. Once at the FAB, the team will stop the clock and not return into the mine.

Ventilation 3

Since there is an inoperative scoop in the No. 2 entry, the ventilation will be routed around the scoop to prevent an explosion. If the team choses to send the explosive gas at the No. 3 barricade down the No. 2 entry over the scoop, they will cause an explosion.

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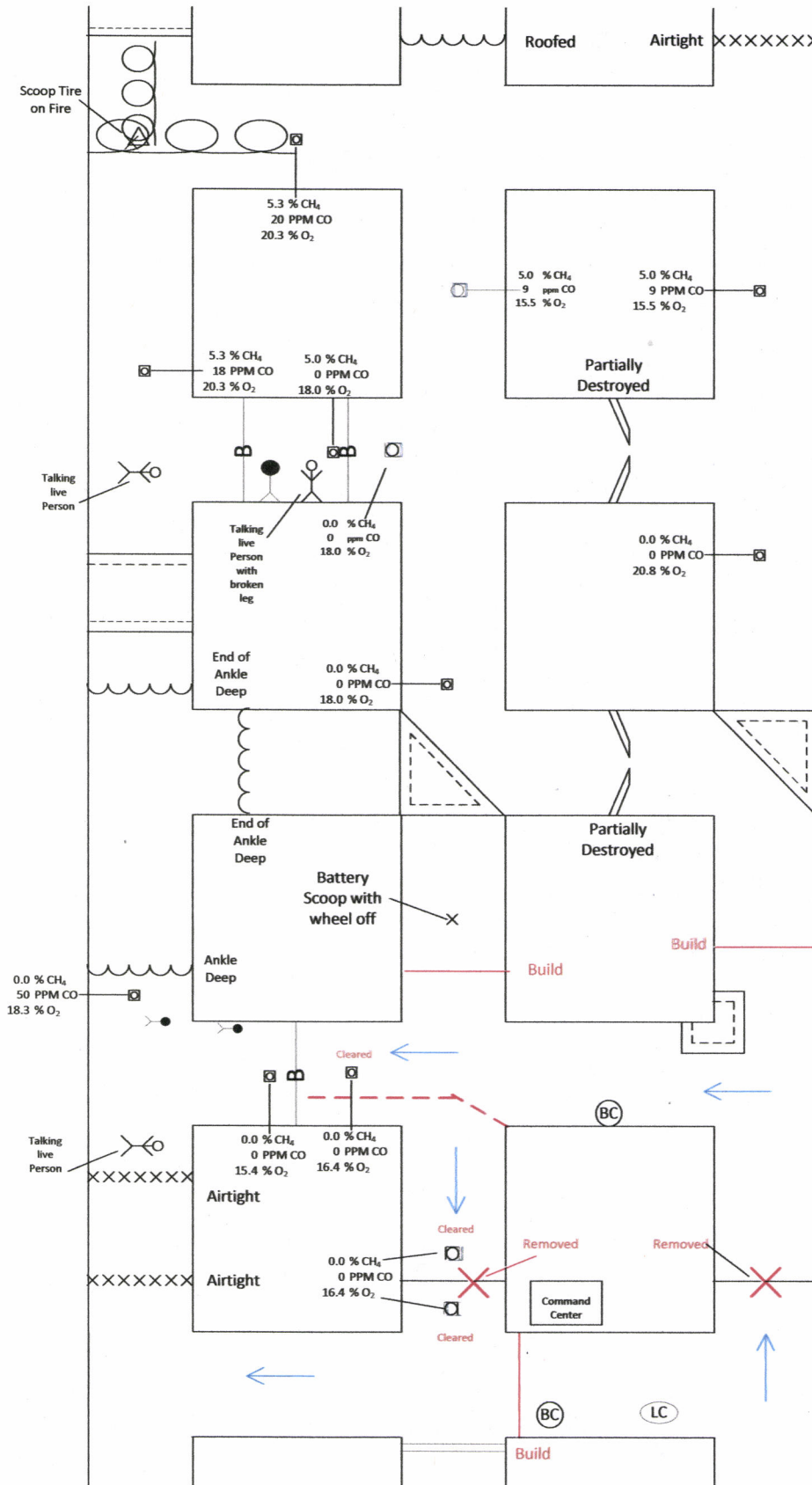
Gas Extent Map



Scale: 1"=10'

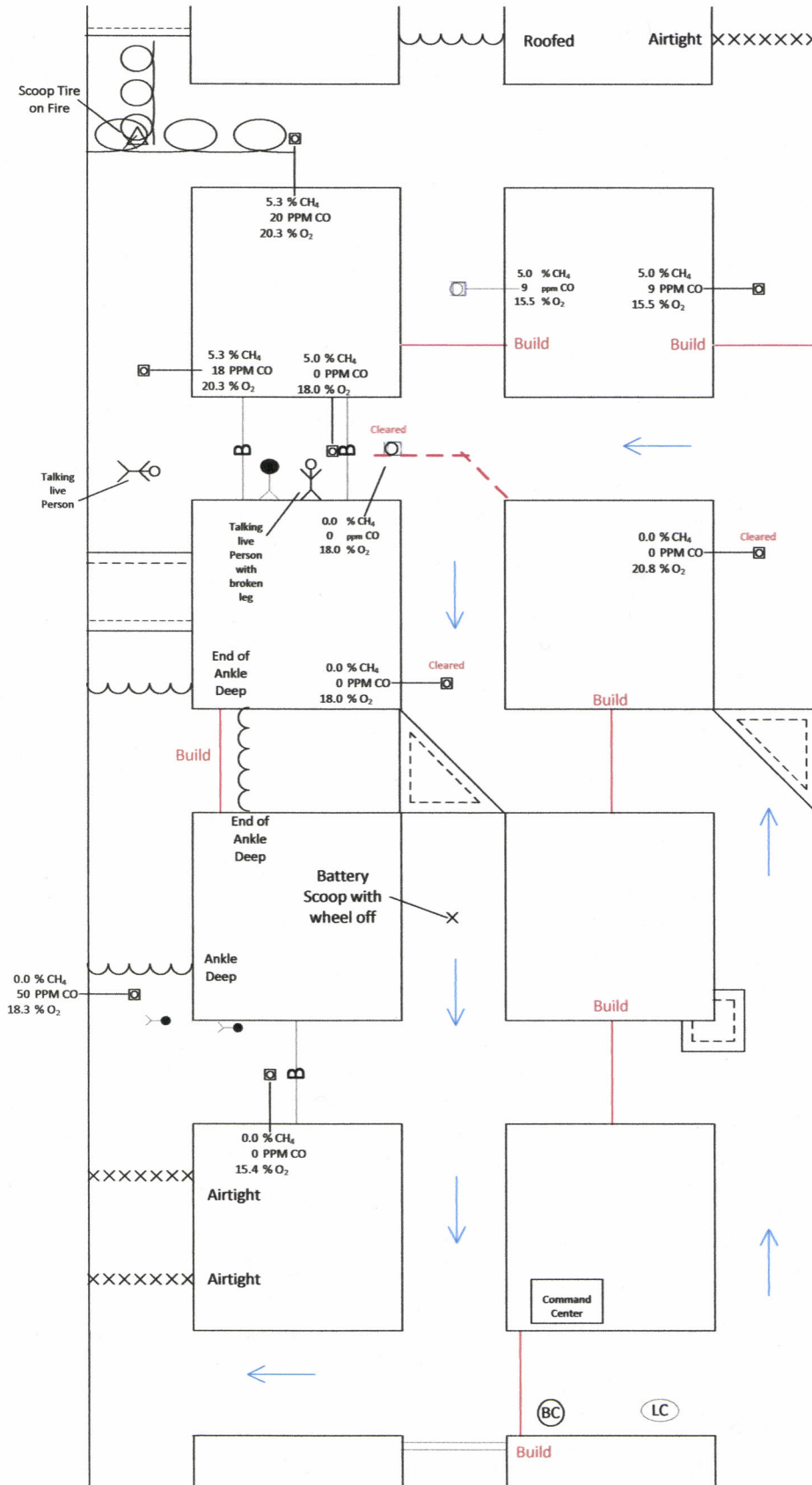
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Ventilation No. 1



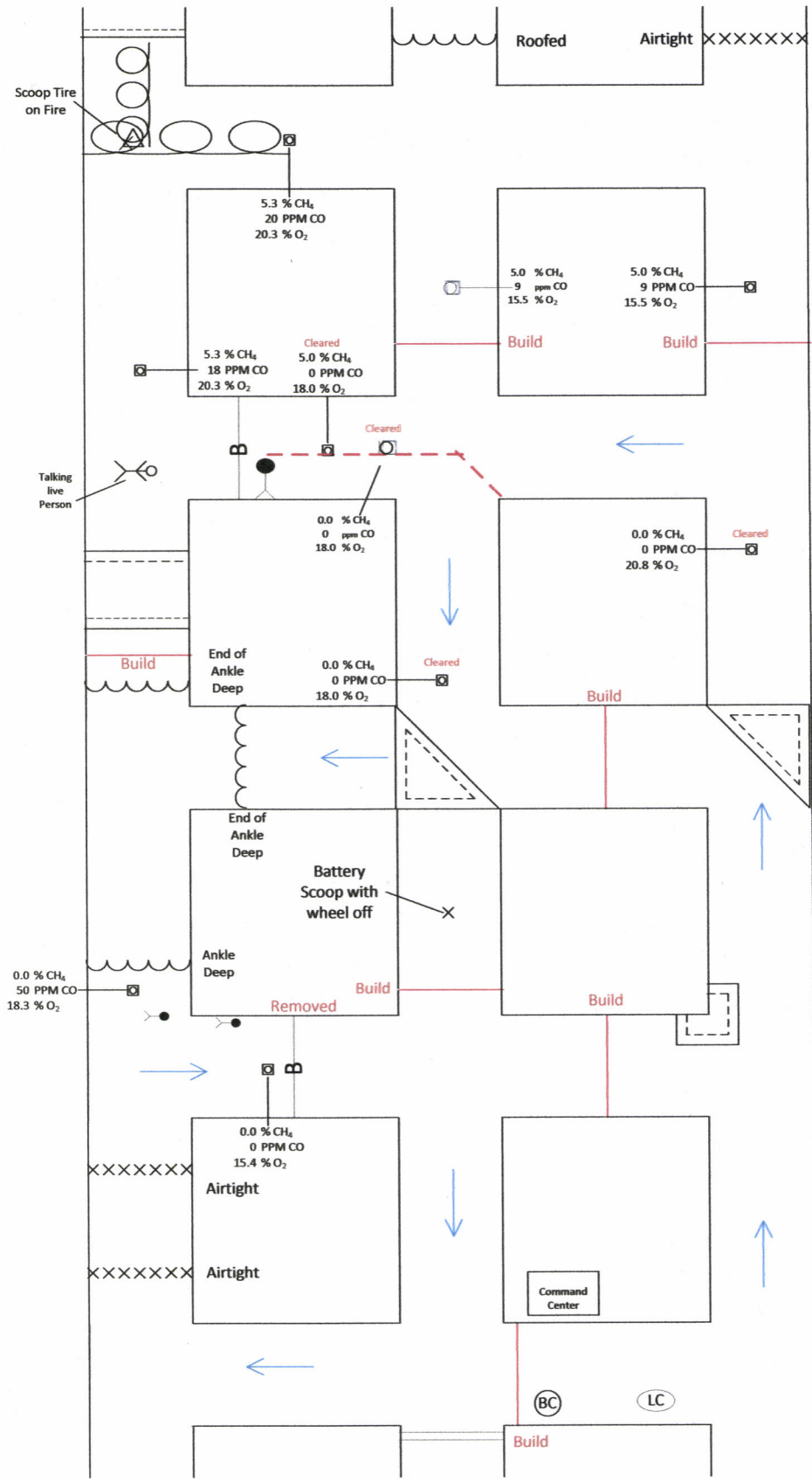
Scale: 1"=10'

Alabama Mine Rescue Day 1 Ventilation No. 2 (1st Option)



Scale: 1"=10'

Alabama Mine Rescue Day 1 Ventilation No. 3 (also 2nd Option)



Scale: 1"=10'