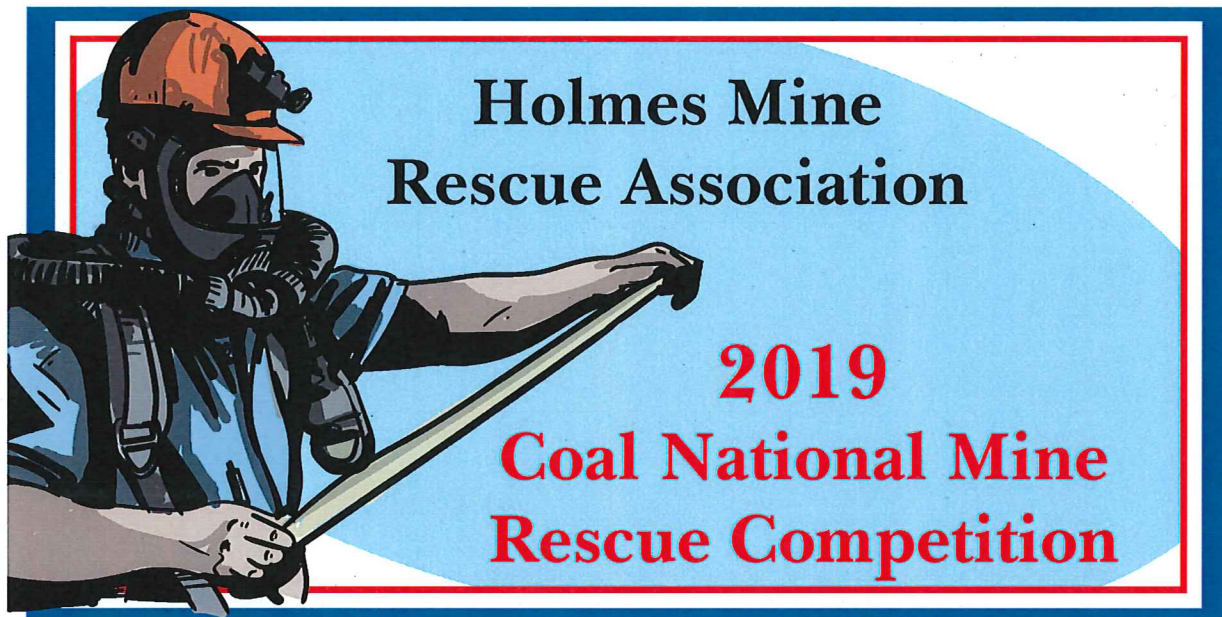


2019  
DAY #1 MINE RESUCE  
PROBLEM



September 24<sup>th</sup>, 2019

Lexington, KY

Judges Packet

# **NATIONAL MINE RESCUE CONTEST**

## **DAY #1-SUPERINTENDENT STATEMENT**

Thank you for answering our call for help and a quick response. I am the mine Superintendent of the Lexington #1 mine.

Last night our maintenance crew had 7 miners travel to the #1 section on northwest mains to move belt, power, and pump water. The last communication with the crew was that they were in the process of moving the RA when the dispatcher heard the sound of rushing water over the radio.

We know that we have been mining close to some very old works, but didn't know how accurate the mine maps would be. Therefore, the mine map is not up to date.

You are currently located in the fresh air base on northwest mains at crosscut #34. The main mine fan is blowing and is currently on and can't be turned off, reversed or stalled.

All authorities have been notified.

The seam height is about 6 feet.

Mine map is not up to date.

There is a trained mine rescue team on site and ready to assist as back up.

Thank you again for your help.

## **PROBLEM**

- **FIND AND LOCATE ALL MISSING MINERS**
- **BRING SURVIVORS TO THE FAB**
- **EXPLORE THE ENTIRE MINE IF SAFE TO DO SO**
- **DO NOT STOP, STALL, OR REVERSE FAN**
- **TEAM CAN ONLY CARRY 2 SETS OF BUILDING MATERIAL AT A TIME**
- **YOU HAVE 80 MINUTES TO WORK PROBLEM BEFORE BEING REPLACED**
- **TEAMS MUST SHOW ALL VENTILATION CONTROLS LEFT INTACT/INSTALLED IN THE MINE ON COMMAND CENTER AND BO MAPS**

# 2019 NATIONAL MINE RESCUE CONTEST

## DAY 1 PROBLEM JUDGES BRIEFING

SEPTEMBER 24, 2019

### Surface/FAB

After clock is started, teams will make the openings for the #1, #2 and #3 entries. Teams will have to airlock into each one, due to the fan running and can't be shut off. Teams will find water over knee deep in #2. Teams will take a GT at the water and DI. Teams will take a GT in both #1 and #3. Teams can advance up #1 or #3.

### Team Stops #1/2

Teams will travel into first cross cut, either up #1 or #3. Teams will conduct their 50 foot apparatus check. In the #1 entry teams will find an unsafe roof with a person/body in the unsafe. Roof test is required (zig zag). GT must be made in the heading and crosscut. Teams that travel up #3 will find unsafe up #3 heading. A roof and rib test and DI at the unsafe. GT must be made in the heading and crosscut.

### Team Stops #2/3

Teams must travel over into the #2 entry and tie first crosscut in. A GT is required down #2 entry, finding the back side of water over knee deep. DI is required at the water over knee deep. A GT is required up #2 heading.

### Team Stops #4/5

Teams can travel up #1 or #2 entry. After the stop is made from either entry, an unconscious live person will be lying in the crosscut. Patient must be placed under oxygen. Caved airtight up #1, RR and DI at the caved, GT in entry. GT is required at wall of overcast and DI required at the wall. NOTE: Door is open, therefore no airlock required. GT also required up #2 and crosscut.

### Teams Stop #6

Teams must tie across to #3. Up #3 entry a GT is required. Teams will find unsafe roof. RR required (zig zag) and DI at the unsafe roof. Teams will observe a body/person in the unsafe. Water pump and scoop observed in entry. Down #3 a GT is required and RR with DI at the unsafe.

### Team Stops #7/8

Teams can travel up #2 or #3 entry. Teams will find water roofed up #3, GT is required up entry and DI required at water. #2 entry, GT is required up heading. RA is observed in crosscut. The captain must enter RA (See rule 36), where a body will be observed. GT is required in crosscut and down #2.

### Team Stop #9

Teams must tie across to #1. GT is required down #1 and up #1 heading. Backside of caved, RR and DI required.

### Team Stops #10/11

Teams can travel up #1 or #2 to LOB. #1 entry teams will find chest deep water up #1 heading. GT and DI required at the water. GT required in crosscut. Note found in the lunchbox, stating "Shane is trapped in #3 entry". #2 entry, teams will find LC installed, chest deep water, small face and body in heading. GT required in heading. DI required at body and face. GT required in crosscut. Teams will find unsafe roof in crosscut. RR required and DI required at the unsafe.

AT this point-Teams have only found 5 miners. Teams must pump water in #3 to continue exploring. Three ventilations are required to pump water (SEE Vent 1, 2 and 3)

### PUMPING WATER

According to RULE 42 (dotted line map and conditions are unknown)-An airlock must be formed in 2 right at the unsafe and in the #3 heading just outby the water.

### Team Stop #12

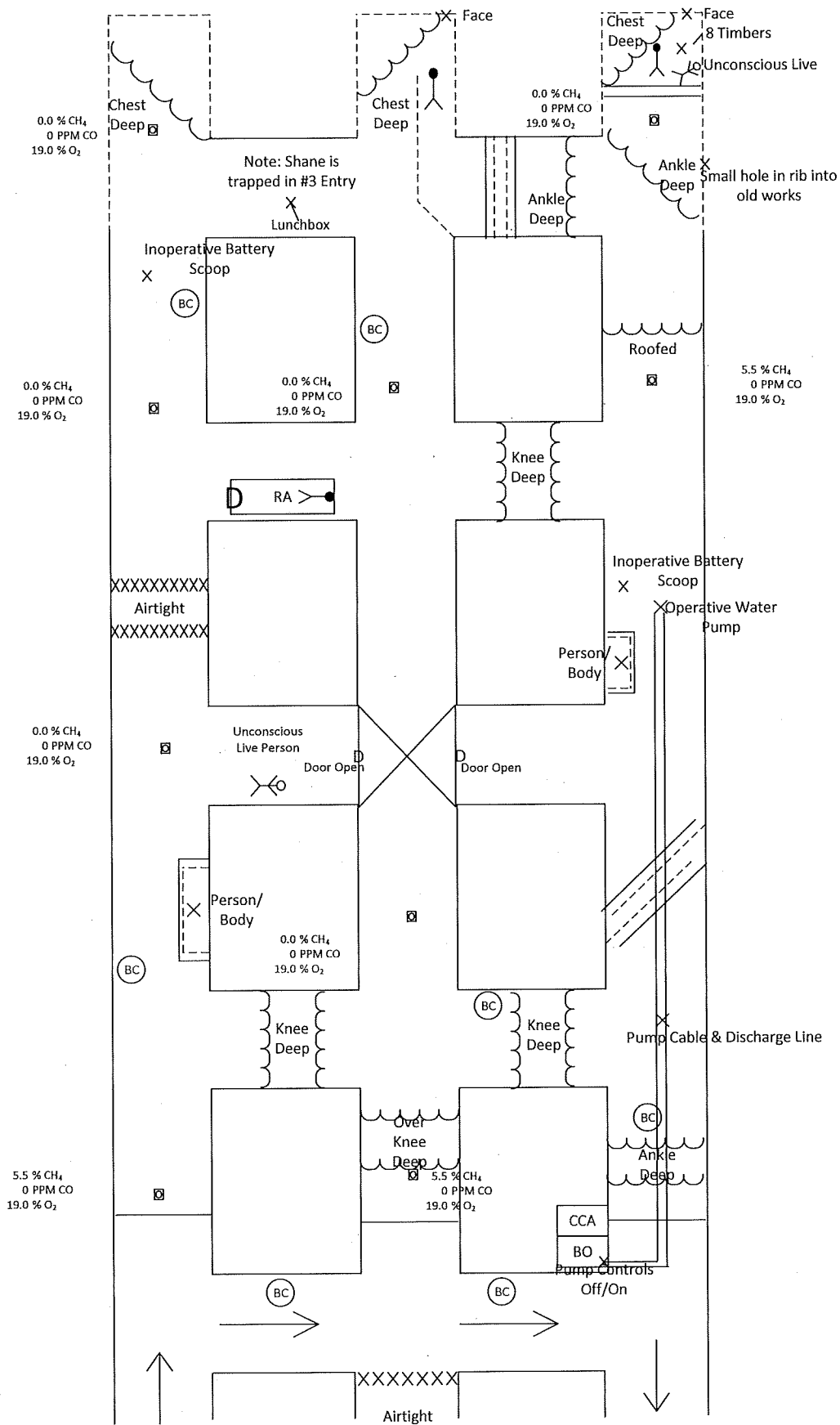
Teams will travel into intersection, finding small hole in rib. In crosscut, GT required. RR and DI required at backside of unsafe. Team will find permanent stopping up #3 entry, with low irrespirable outby extending to stopping. GT and DI required at stopping. No response from other side, therefore an airlock is required and teams may enter (Rule 35). Teams travel inby and find a body and unconscious live person. Oxygen is required. A GT is required inby and DI required at body and face. Teams will take timbers with them.

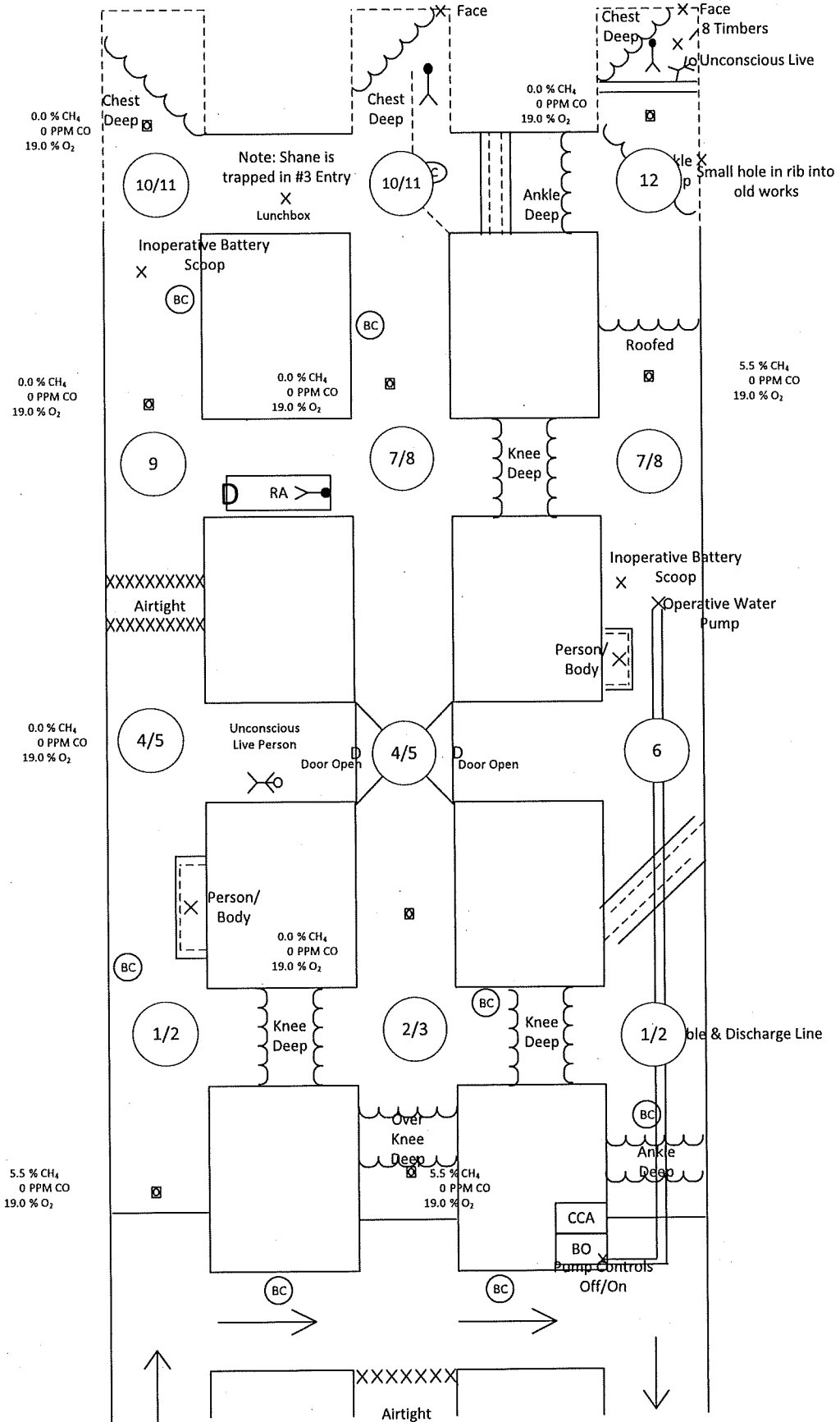
After taking patient to the FAB, teams must timber into unsafe and DI bodies.

Team: \_\_\_\_\_

# 2019 National Mine Rescue

# Key Map

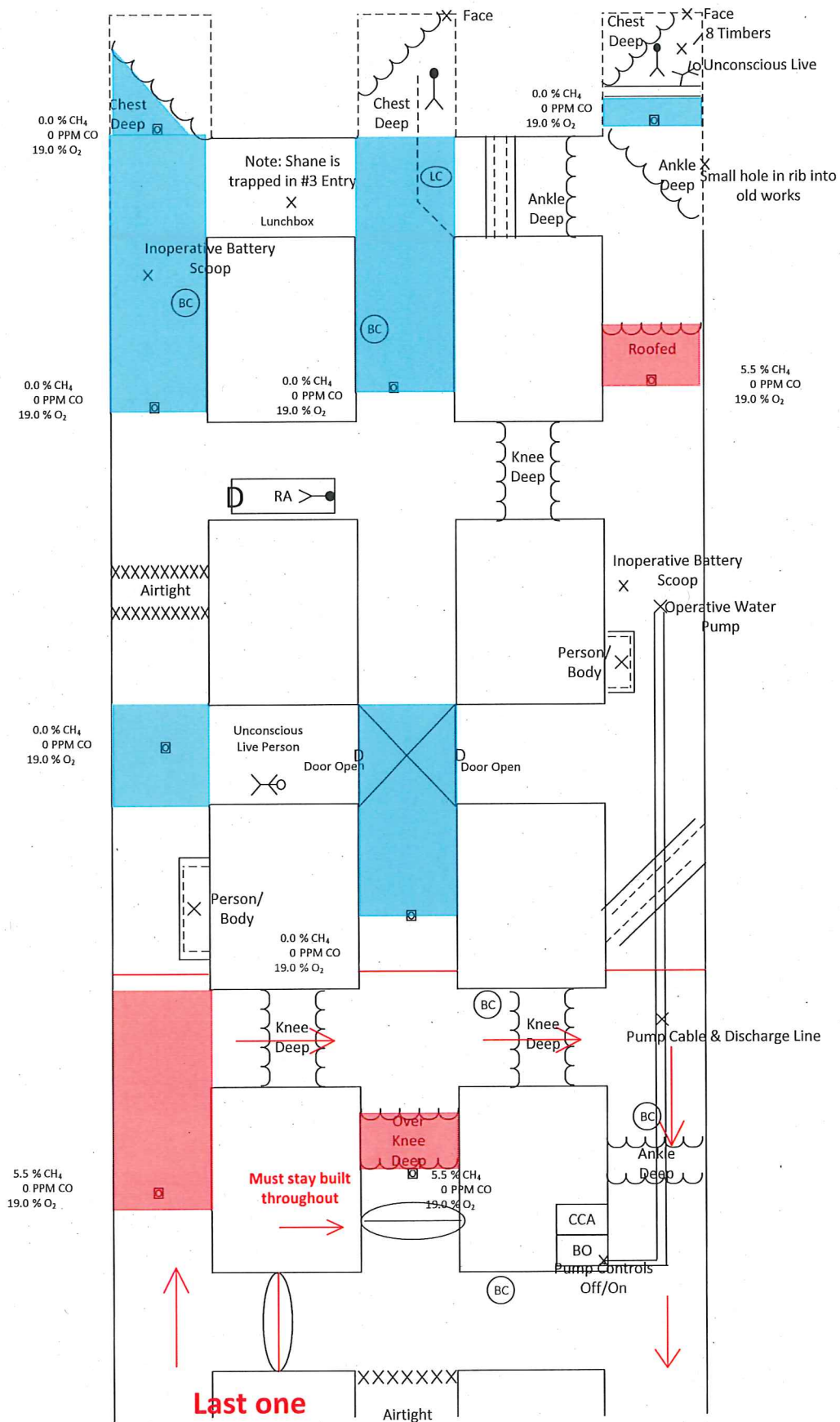




Team: \_\_\_\_\_

# 2019 National Mine Rescue

## VENT 1



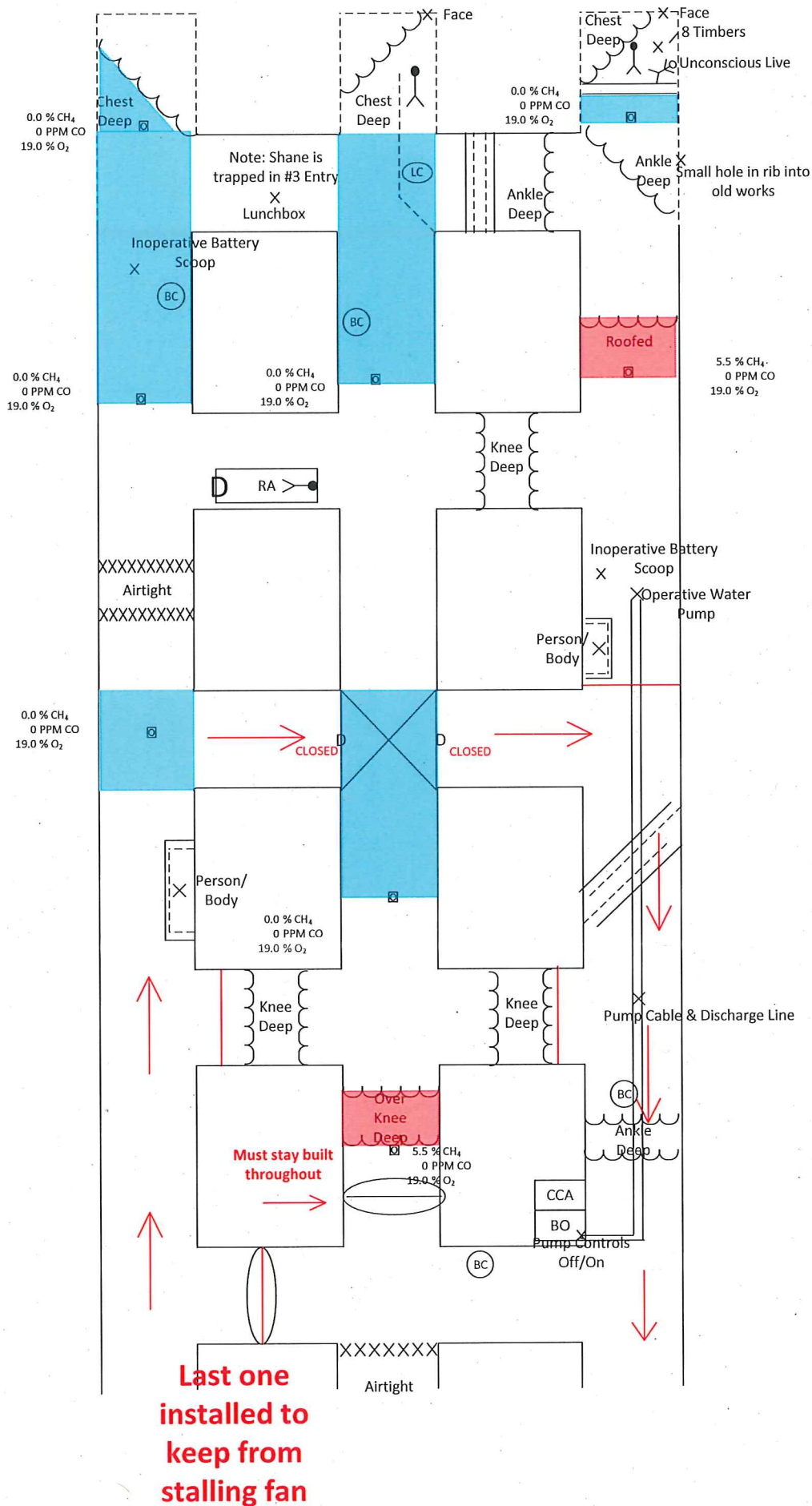
**Last one installed to keep from stalling fan**



Team: \_\_\_\_\_

# 2019 National Mine Rescue

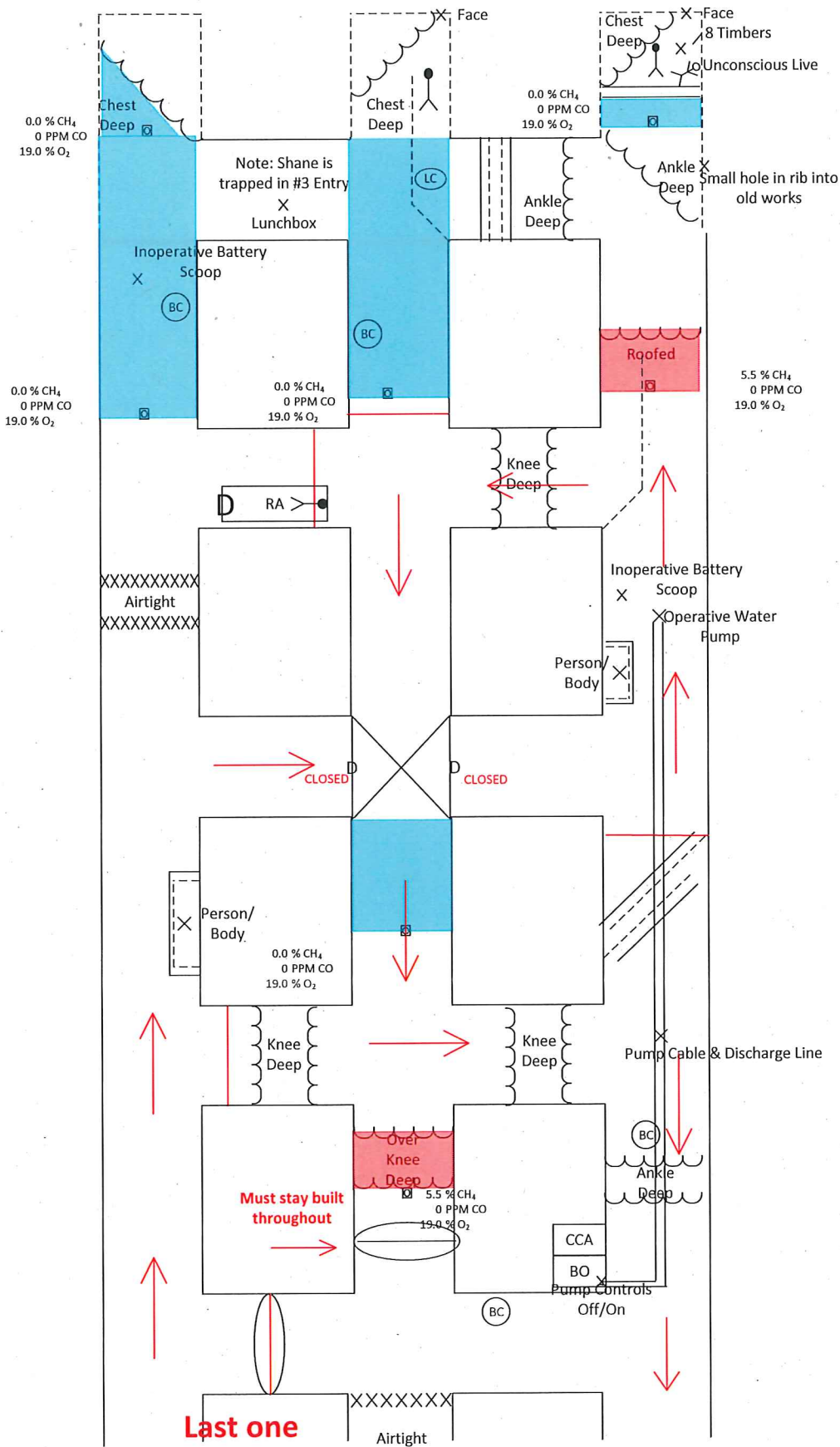
## VENT 2



Team: \_\_\_\_\_

# 2019 National Mine Rescue

# VENT 3

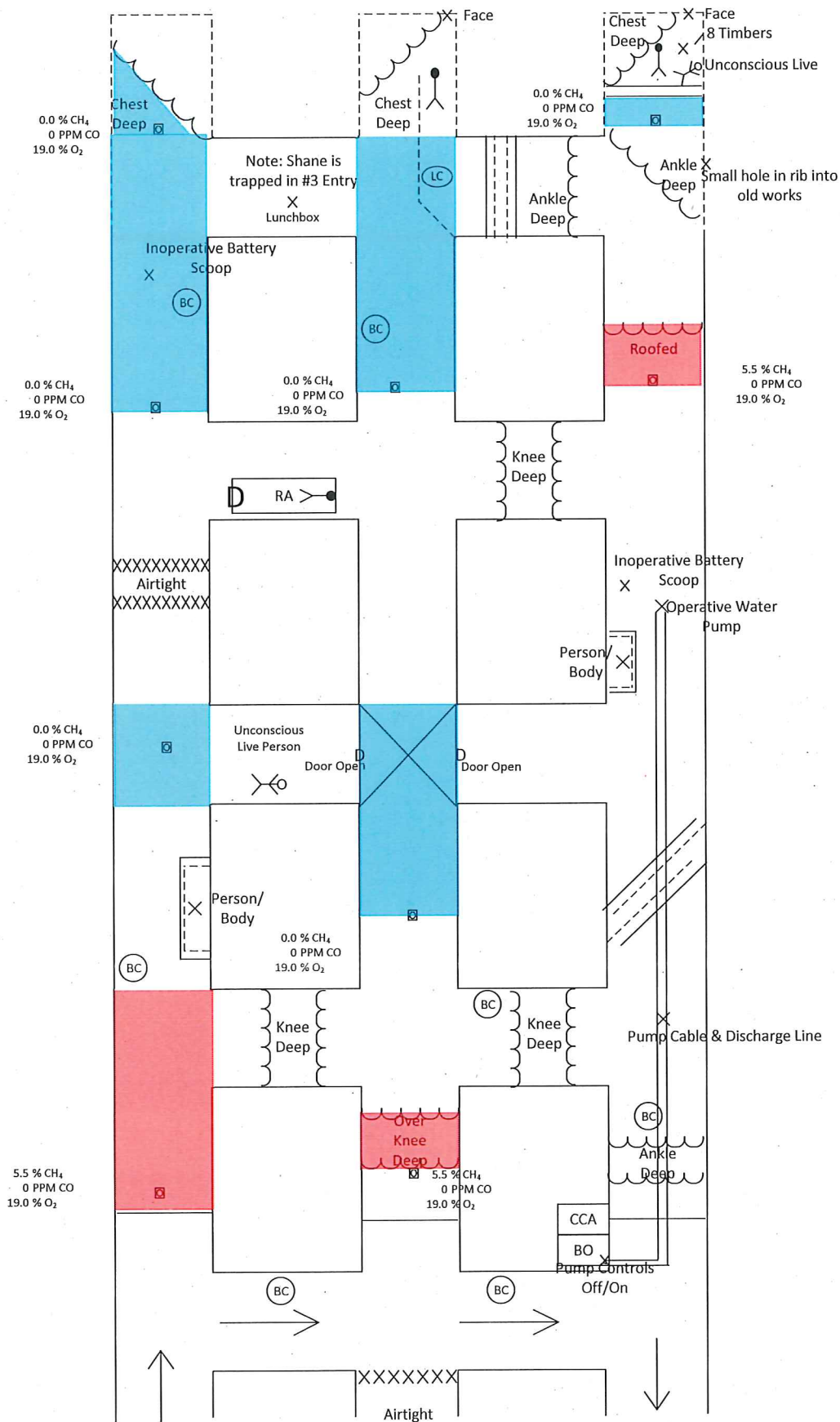


**Last one installed to keep from stalling fan**

Team: \_\_\_\_\_

# 2019 National Mine Rescue

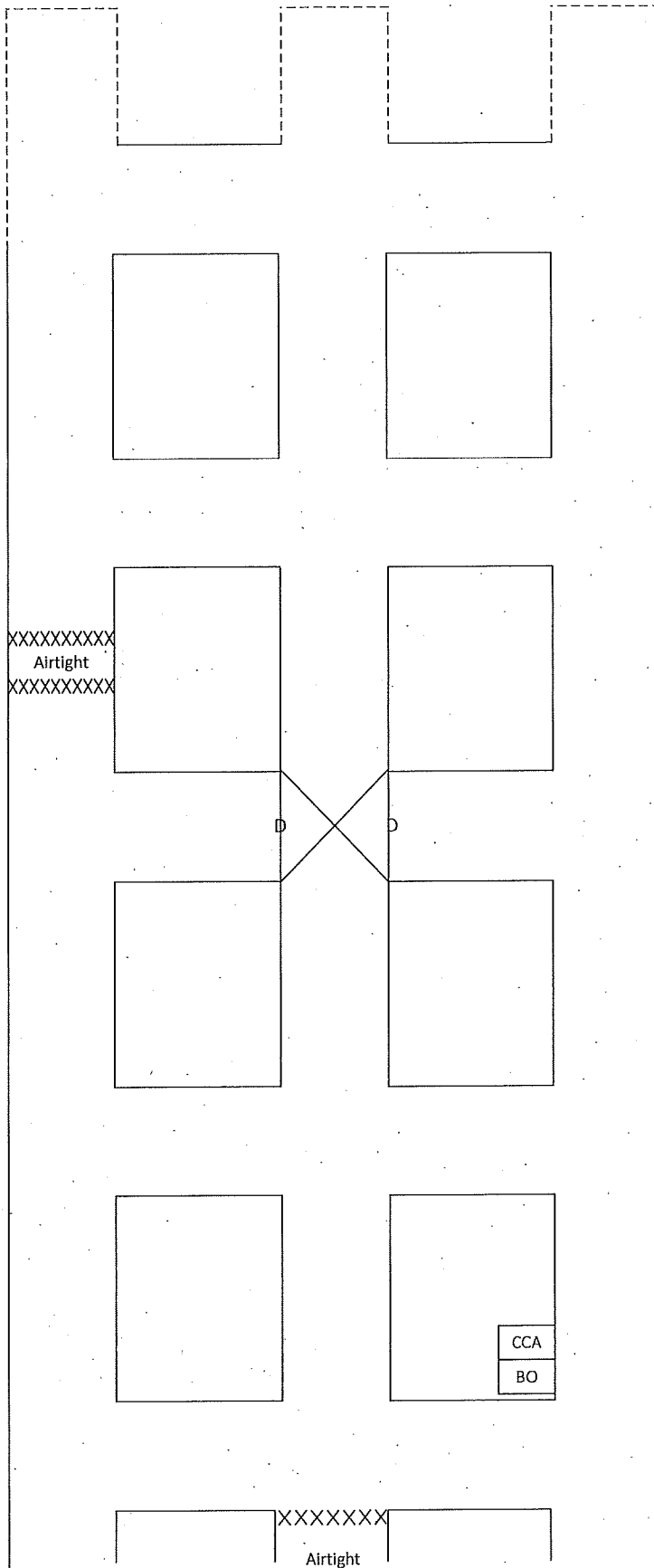
## Extent of Gas



Team: \_\_\_\_\_ 2019 National Mine Rescue

BLANK MAP

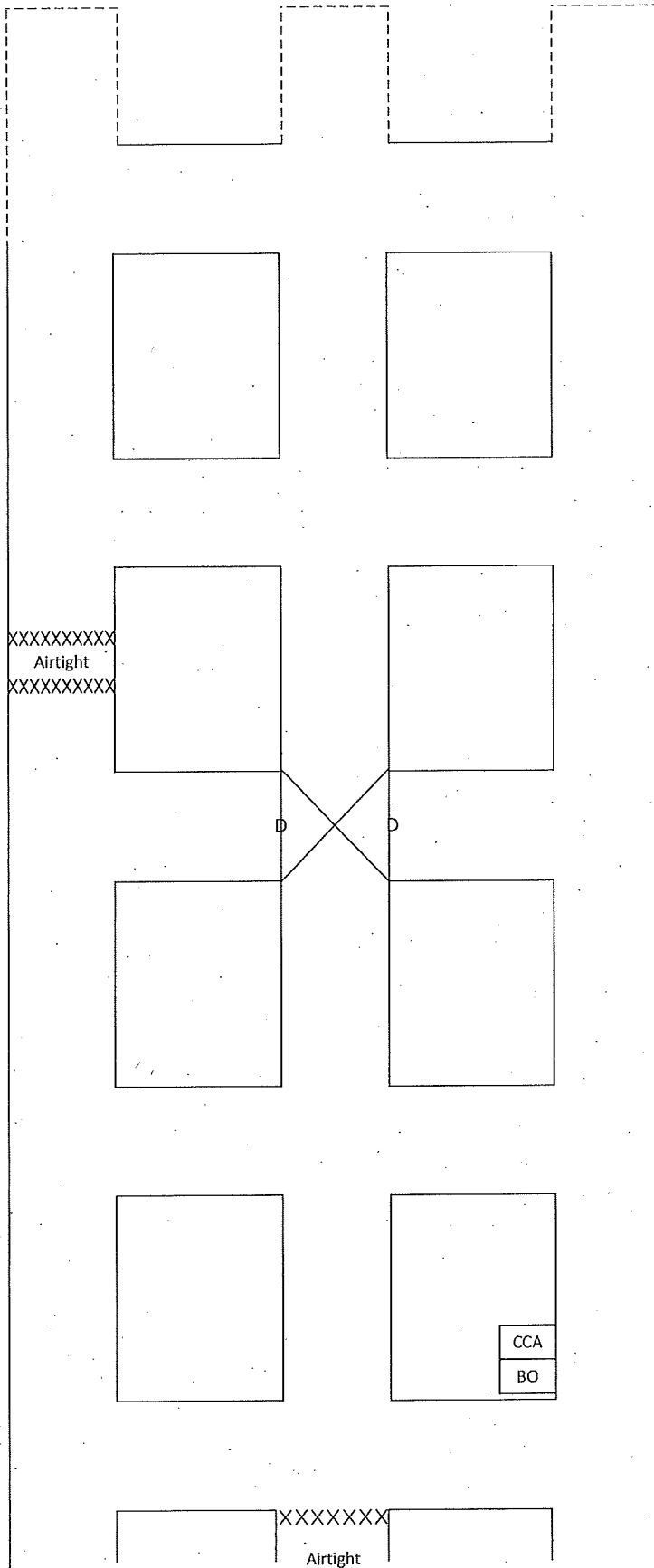
Field: \_\_\_\_\_



Team: \_\_\_\_\_ 2019 National Mine Rescue

BLANK MAP

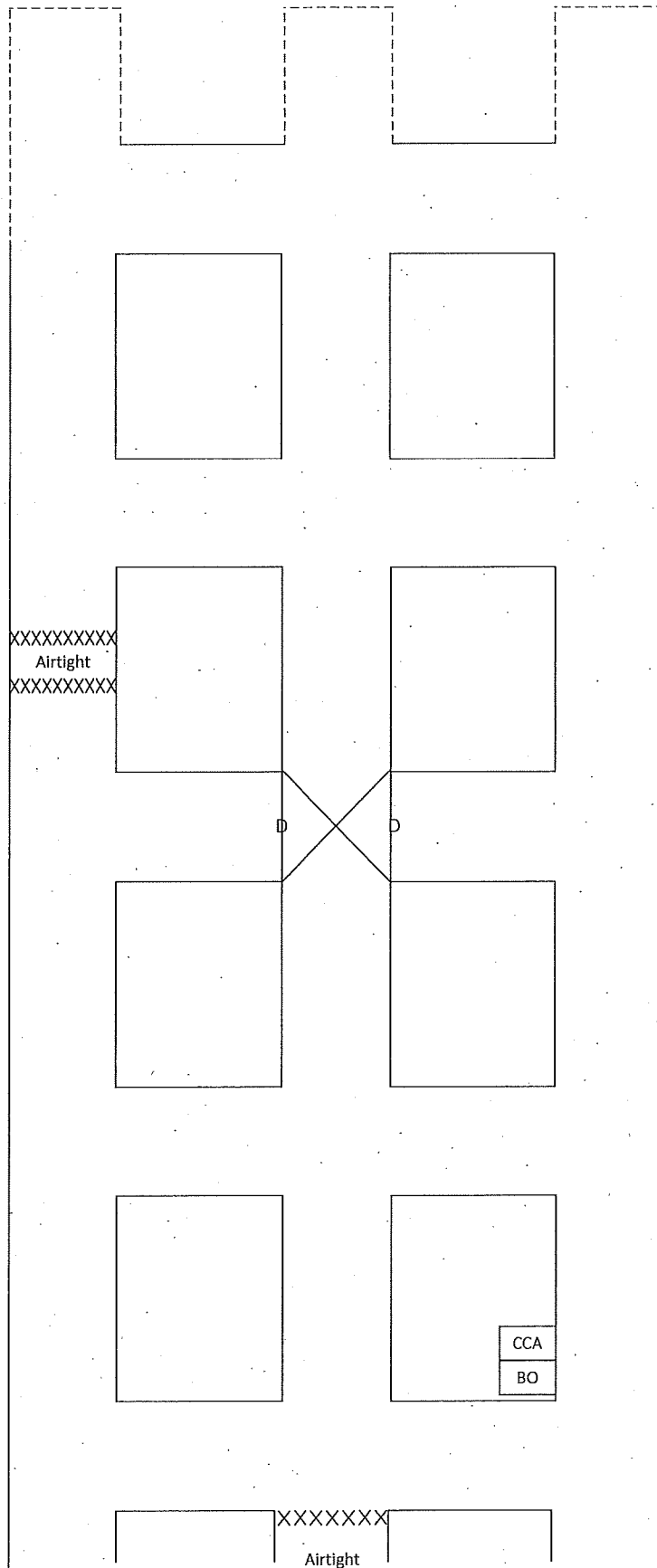
Field: \_\_\_\_\_



Team: \_\_\_\_\_ 2019 National Mine Rescue

BLANK MAP

Field: \_\_\_\_\_



Team: \_\_\_\_\_ 2019 National Mine Rescue

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Field: \_\_\_\_\_

