

2019 National Mine Rescue Contest

Day 2 Superintendent Statement

September 25, 2019

Thank you for answering our call for help. You are on the surface of the Last Hurrah Mining Company's Last Chance Mine. This mine had been idled for a couple of years until we got a new contract. We have been rehabilitating the mine for a while, and just started running again last week. Last night, our four-man maintenance crew was getting things set up for our day shift production crew.

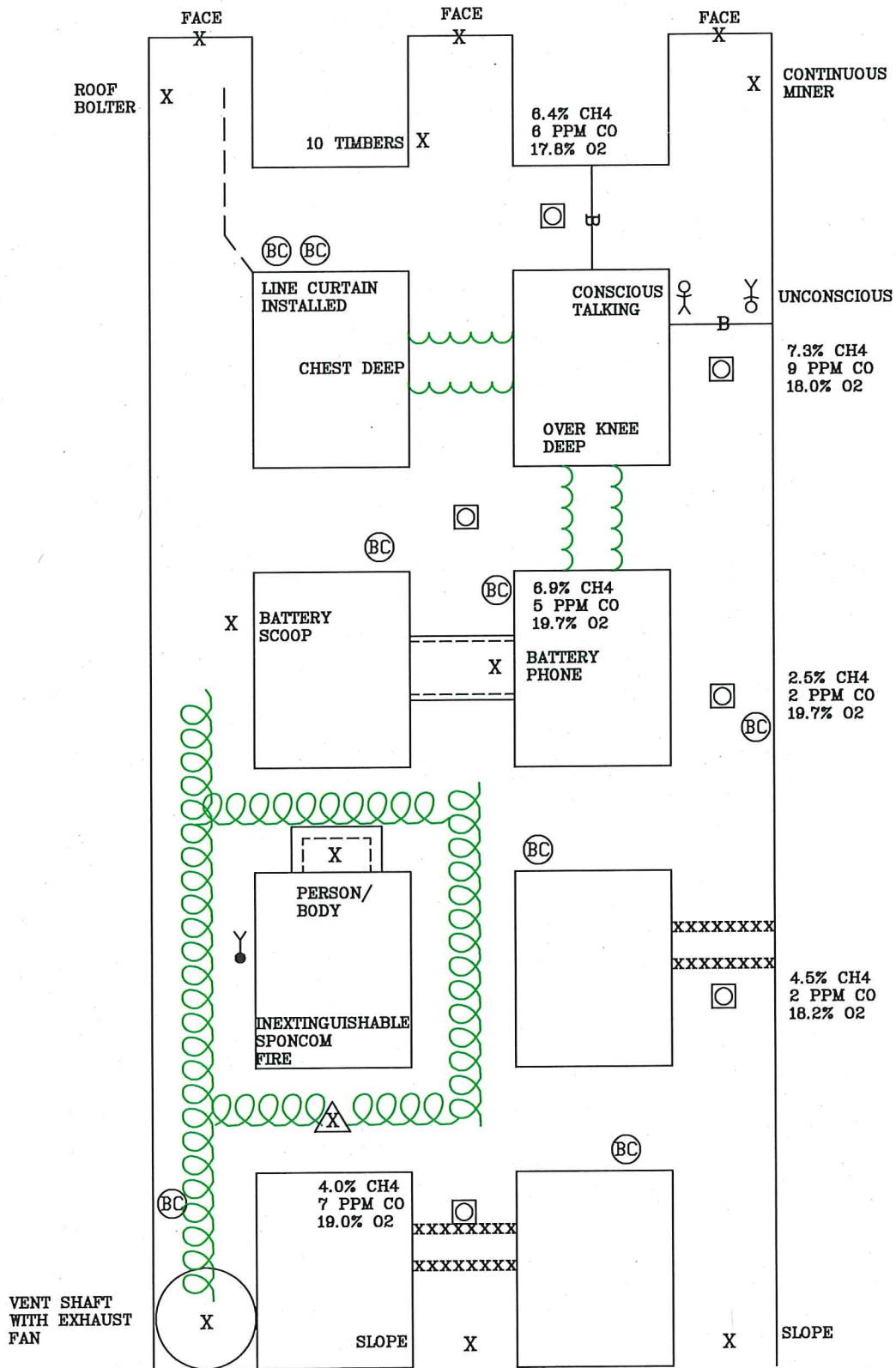
This mine has two slopes and a vertical ventilation shaft with an exhausting fan. The #3 entry/portal is the intake, and the #2 entry/portal is the belt. The ventilation shaft is in the #1 entry.

About 2 hours ago, our outside man heard a loud noise. He noticed the exhaust fan on the ventilation shaft went off, and smoke started coming out the shaft. We tried to communicate with the men, but got no answer. The tracking and communication system stopped working also. We contacted mine rescue teams. All the state and federal people are here and you have teams to back you up.

This coal seam has some bad roof conditions, and some water problems. It is a gassy seam, too. The mine maps are up-to-date. The underground power is locked and tagged out. The exhausting fan cannot be reversed. If you want to start it, ask the command center and they will get it going.

We have a person to help with your lifeline should you need it.

Please find our missing miners. Thank you and good luck.



PROBLEM

FIND ALL MISSING MINERS AND BRING SURVIVORS TO THE SURFACE

EXPLORE THE ENTIRE MINE IF SAFE TO DO SO

YOU HAVE 85 MINUTES TO WORK BEFORE YOU ARE REPLACED BY ANOTHER TEAM

YOU CAN ONLY CARRY TWO SETS OF BRATTICE CLOTH WITH YOU AT A TIME

THE FAN CANNOT BE REVERSED

TEAMS MUST SHOW ALL VENTILATION CONTROLS LEFT INTACT/INSTALLED IN THE MINE ON COMMAND CENTER AND BO MAPS

**BARRICADE
PATIENT STATEMENT**

HELP!! GET ME OUT

2019 National Mine Rescue Contest

Day 2 Problem Judges Briefing

September 25, 2019

Surface/Fresh Air Base

After clock is started, teams will make the openings for the #2 and #3 slope entries. Teams will find a caved area in the #2 entry. Teams will do a Gas Test (GT) at the caved area in the #2 entry and the captain must Date and Initial (DI) and do a Roof and Rib (RR) test at the caved area. Teams will make a GT in the opening in the #3 entry. Teams will have to advance into the mine in the #3 entry.

Team Stop #1

Teams will travel to the first crosscut in the #3 entry and conduct their 50 foot apparatus check. Teams will find an irrespirable atmosphere in the entry inby, and then a caved area. The crosscut toward #2 entry is clear. The captain must DI and do a RR test at the caved area, and a GT must be made caved area. A GT must be made in the opening toward the #2 entry. (See Dates and Initials, Gas Tests and Roof and Rib page.)

Team Stop #2

Teams will tie across to the #2 entry in the first crosscut. Teams will encounter smoke in the intersection and must be on a lifeline. If using radios, teams must tie off before all team members enter the smoke. The smoke extends inby in the #2 entry and in the crosscut toward the #1 entry. In this crosscut, teams will find an inextinguishable fire. The captain must do a RR test and a GT at the fire, and a GT in the opening inby in the #2 entry. The captain will also have to DI at the fire since it stops the team's travel. Teams will find the backside of the caved area outby in the #2 entry, along with an irrespirable atmosphere that extends into the caved area. Teams must take a GT at the caved area, and the captain must DI and do a RR test at the caved area.

Team Stop #3

Teams will travel up the #2 entry to the second crosscut. Teams are in smoke so must be on lifeline. Teams will an area of unsafe roof inby in the #2 entry, and an elongated unsafe roof in the crosscut toward the #1 entry with a person under the unsafe roof. A GT must be made at the unsafe roof, and in the opening toward the #1 entry and #3 entry. The captain must DI the unsafe roof in the #2 entry, and must make a RR test at both areas of unsafe roof. The smoke is in the intersection and in

the crosscut toward #1, so everyone must still be on the lifeline. The team cannot reach the person at this time, so must continue exploring.

Team Stop #4

Teams must follow the smoke and travel to the #1 entry. Teams will find the end of smoke in the entry inby, and a body in the entry outby the intersection. A GT must be made in both openings, and the captain must stop and touch the body before anyone passes it, and must DI at the body. The smoke continues outby in the #1 entry.

Team Stop #5

Teams must tie outby in the #1 entry to the first crosscut. Teams will find the back side of the inextinguishable fire in the crosscut toward the #2 entry. In the entry outby, teams will find the bottom of the ventilation shaft. Teams must take a GT at the bottom of the shaft and at the heading, and at the fire. The captain must DI and do a RR test at the fire. The captain must DI the heading that stops advance in the entry outby the ventilation shaft. The team is still in smoke and must be on the lifeline.

Team Stop #6

Teams must travel back to the second crosscut in the #3 entry. Once all team members get past the smoke, the lifeline can be dropped by teams using radios. Teams must make a GT in the opening inby the intersection and at the back side of the caved area outby the intersection. The captain must DI and do a RR test at the caved area, and a GT must be made at the caved area. A contaminant is found in the entry inby the intersection.

Team Stop #7

Teams must follow the contaminant and travel up the #3 entry, since the adjacent entry is currently inaccessible. Teams will find an explosive/irrespirable atmosphere in the opening inby, and a barricade. There will be a response from behind the barricade. Teams cannot breach the barricade at this time, so must continue exploration. The captain must DI at the barricade, and a GT must be made at the barricade. Teams will find water over knee deep in the crosscut toward the #2 entry. Teams will take a GT at the water, and the captain must DI at the water.

Team Stop #8

Teams must travel back outby then across to the #1 entry, then inby to the 3rd crosscut. Teams must be on a lifeline when they go through the smoke. Teams will take a GT in the entry inby and in the crosscut toward the #2 entry.

Team Stop #9

Teams must tie across to the #2 entry. Teams will find the backside of the unsafe roof in the entry outby the intersection, and the backside of the water over knee deep in the crosscut toward the #3 entry. The captain must DI at both areas, and do a RR at the unsafe roof. Teams must make a GT at the caved area and the water over knee deep. Teams will also find water chest deep in the entry inby the intersection. Teams must make a GT at the water chest deep and the captain must DI at the water. There is an explosive mixture in the intersection.

Team Stop #10

Teams will travel back to the #1 entry, then travel inby in the #1 entry. Teams will find a face inby the intersection, and a line curtain installed. Teams must make a GT at the face and in the opening to the right of the intersection. The captain must DI the face and do a RR test at the face. Teams still cannot ventilate the barricade, so they must continue exploration.

Team Stop #11

Teams will travel to the intersection in the #2 entry. Teams will find a face inby in the entry, the backside of the water chest deep outby in the entry, and another barricade in the crosscut toward the #3 entry. Teams find 10 timbers at this stop. There is an explosive/irrespirable atmosphere in front of this barricade. There is the same response behind this barricade. Teams can now ventilate this second barricade.

However, teams must first timber into the person under the unsafe roof. After the captain touches the placard and turns it over, it will be a body. The captain must DI at the body.

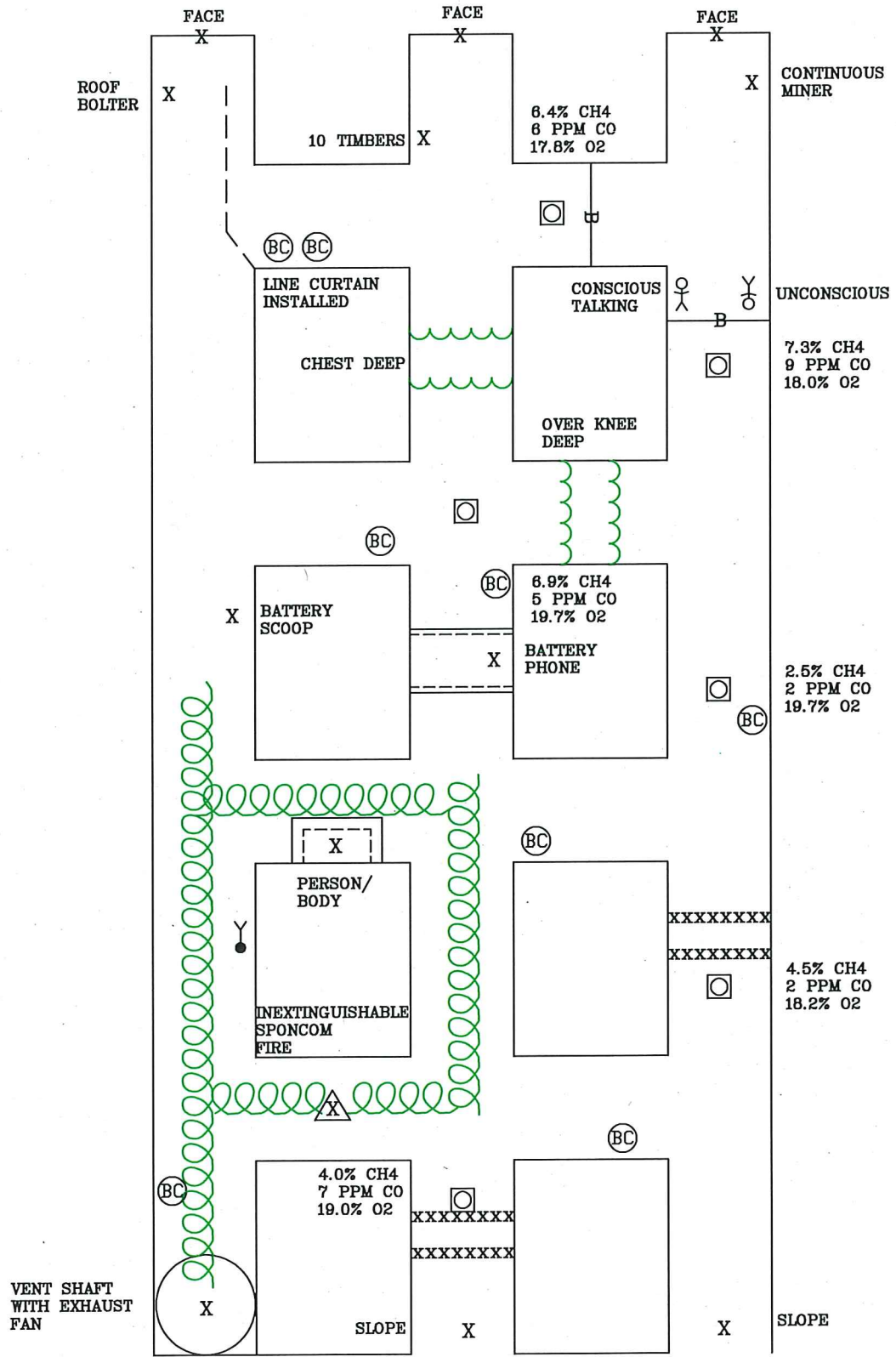
See Ventilation #1

See Ventilation #2

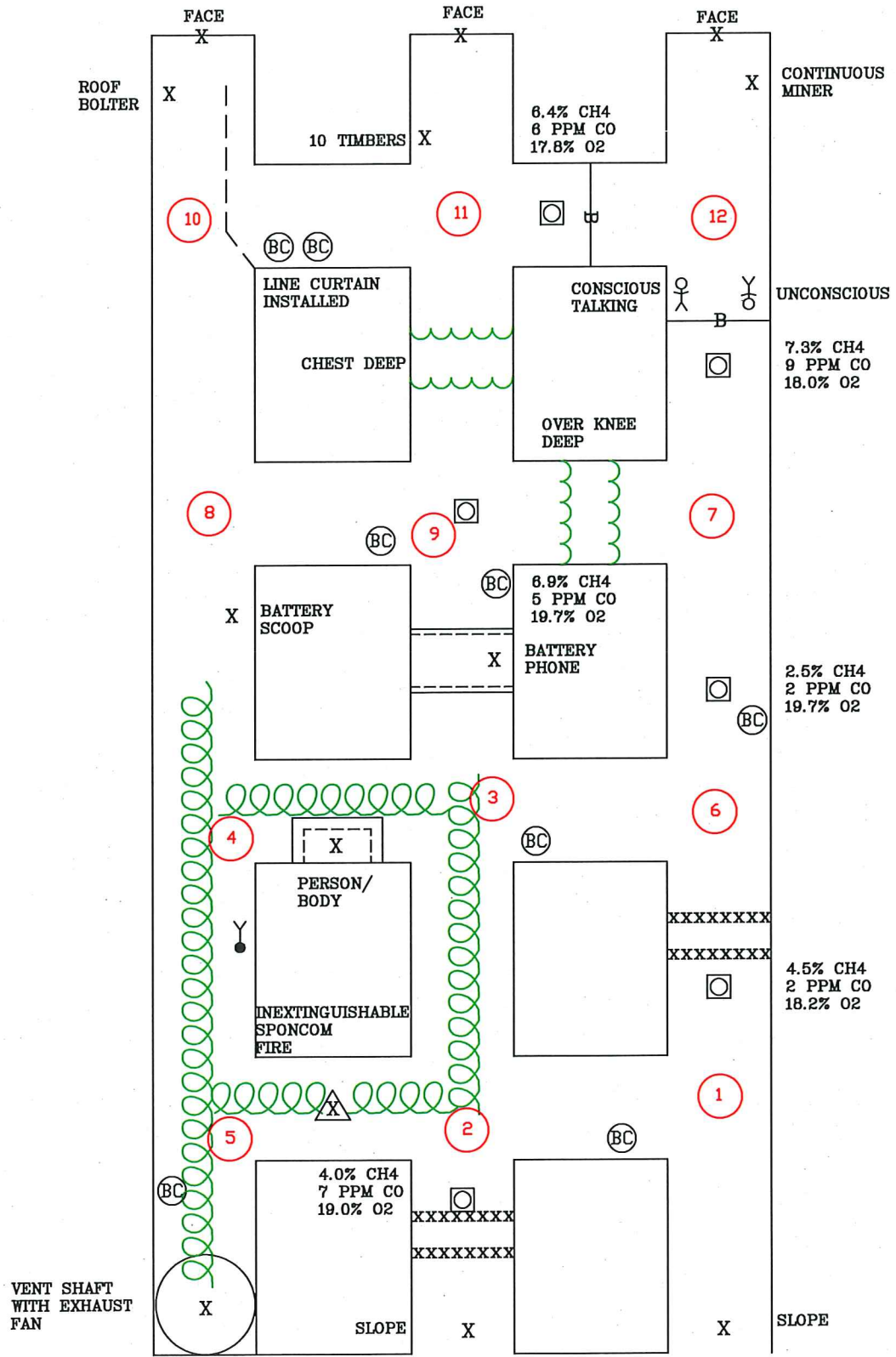
See Ventilation #3

Team Stop #12

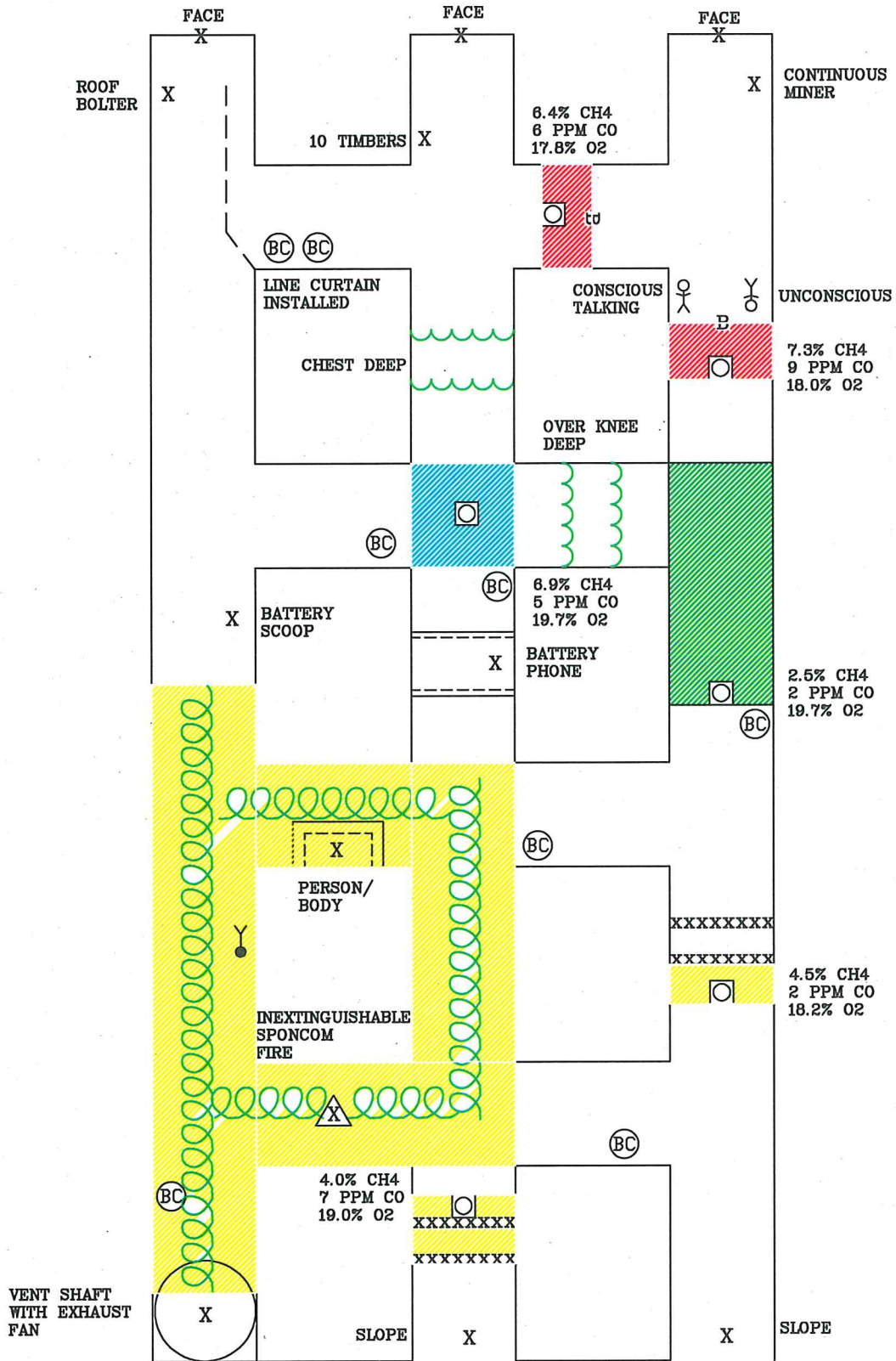
Teams must airlock to enter the barricade. Teams will find a face inby the intersection. The captain must DI the face and do a RR at the face. A GT must be made at the face. The teams find the conscious talking person and an unconscious live person in the entry outby the intersection. The teams must do a patient assessment on both persons. The unconscious patient must be placed on a stretcher to be brought outside. The captain must DI at both patient's location and at the backside of the barricade outby them. A GT must be made at the barricade. Teams will bring the patients to the surface and stop the clock.



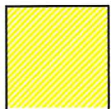
TEAM STOPS



EXTENT OF GASES



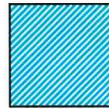
CONTAMINANT



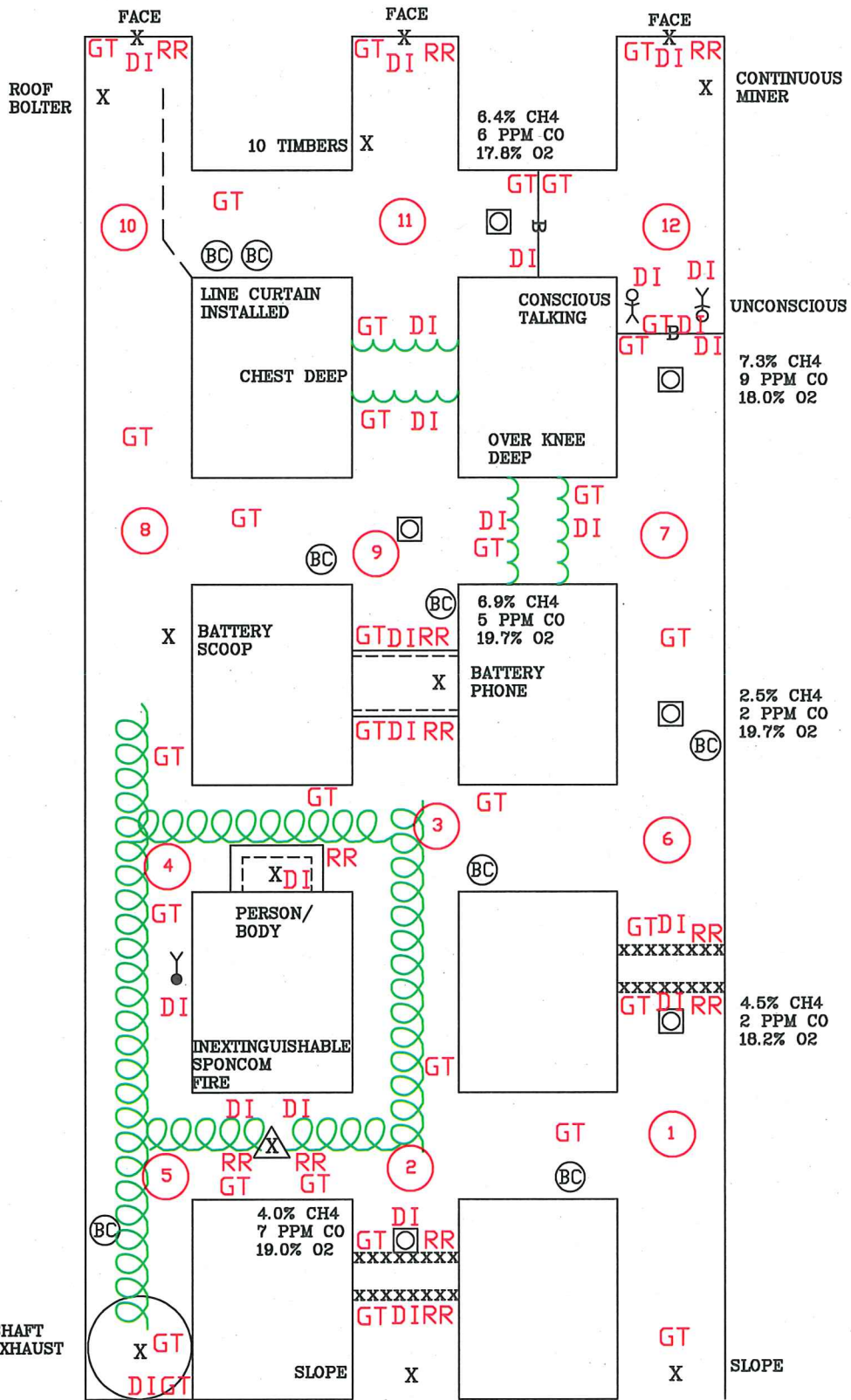
IRRESPIRABLE



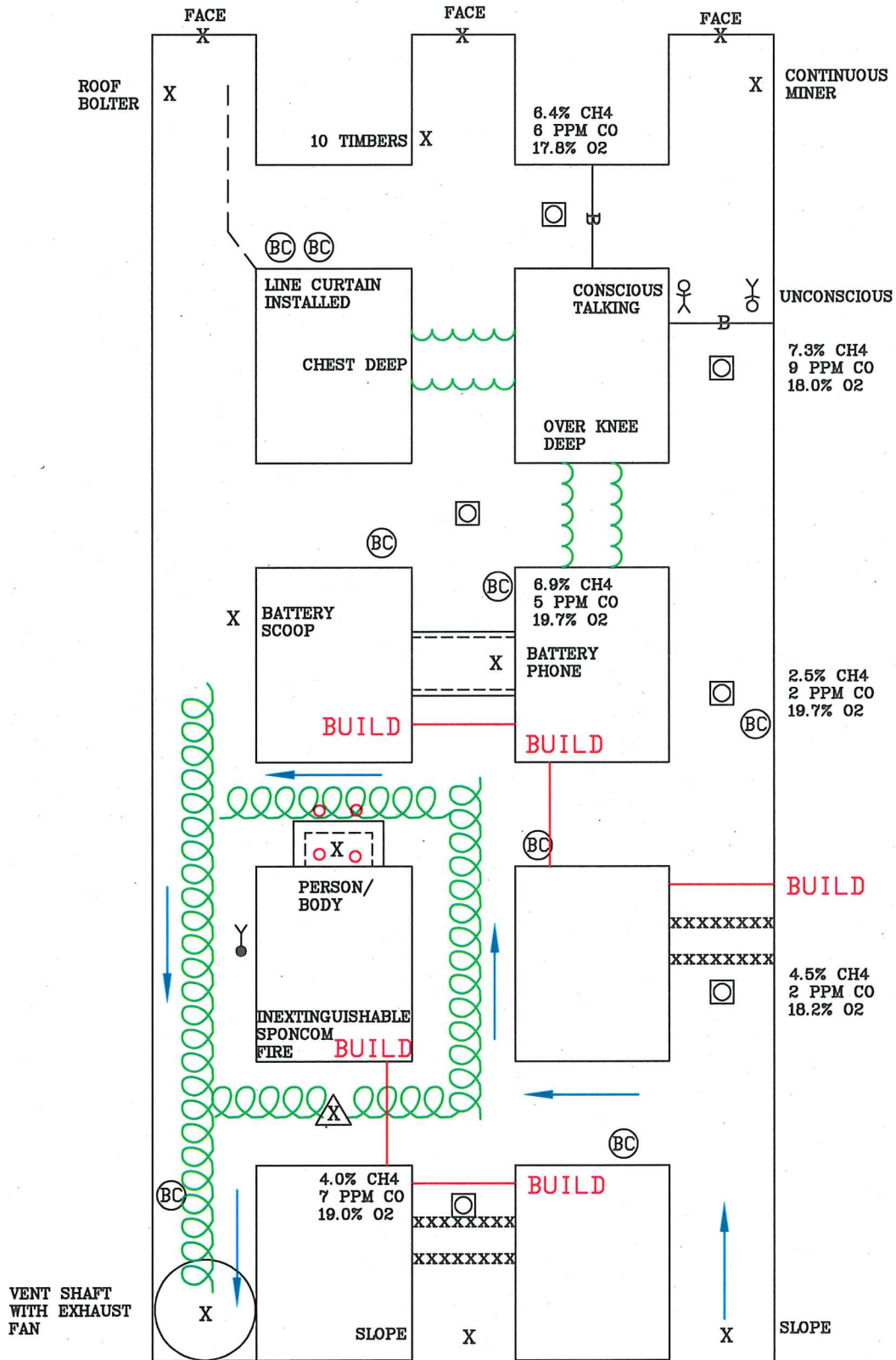
EXPLOSIVE &
IRRESPIRABLE



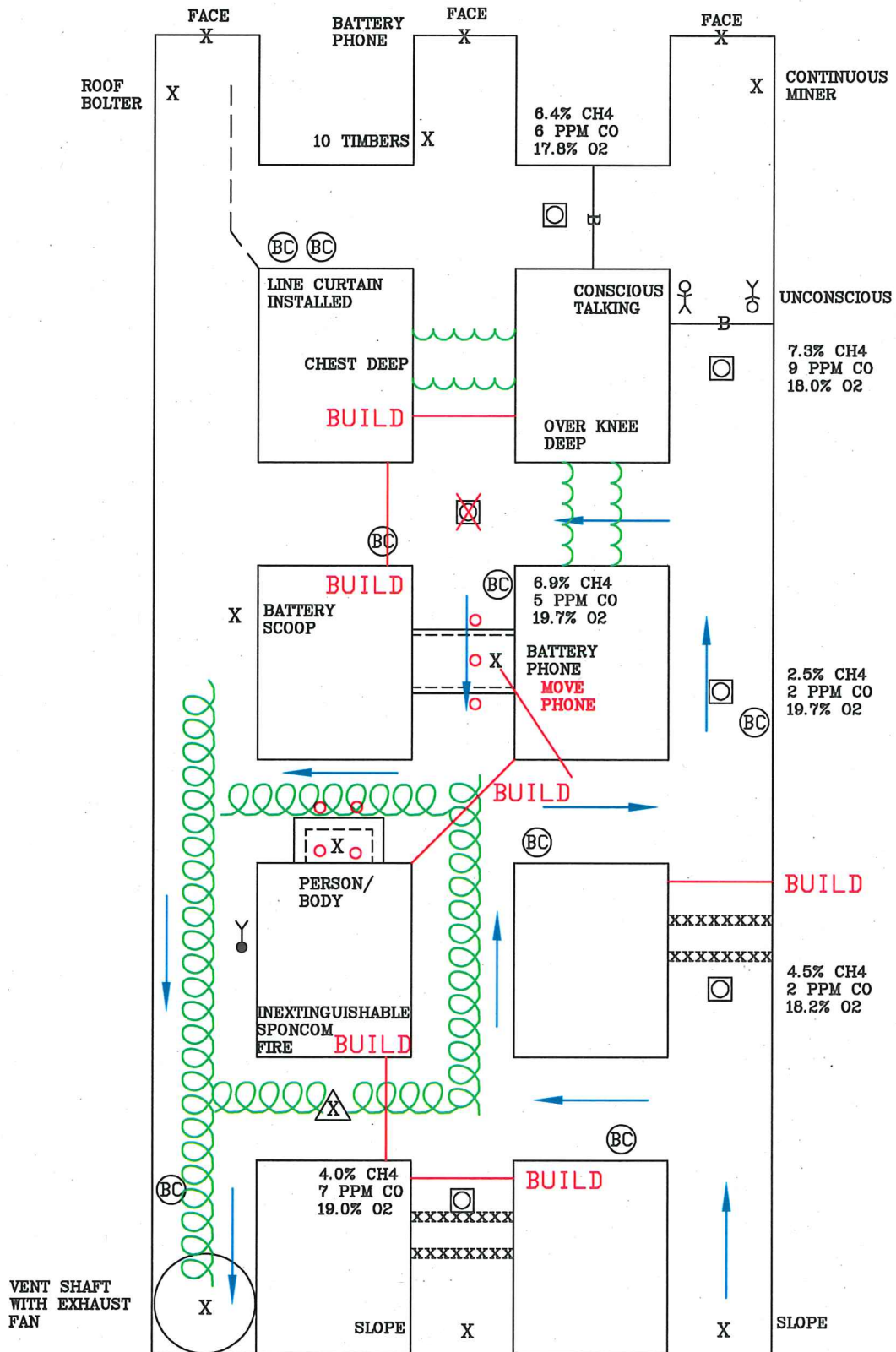
EXPLOSIVE



VENT 1



VENT 2



VENT 3

