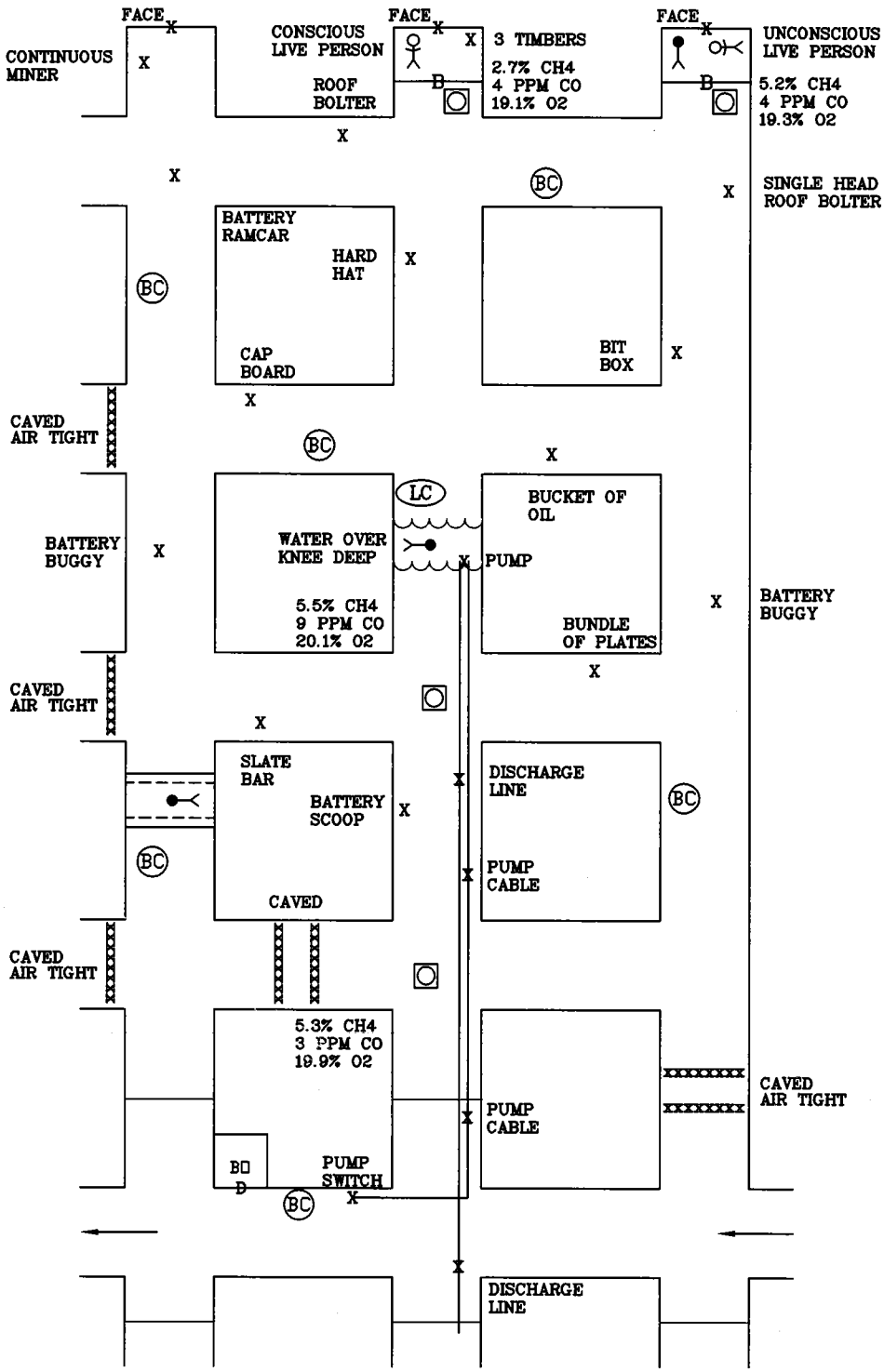
Kentucky River Mine Rescue Contest

June 14, 2012

Day 2 Problem

Kentucky River 2012 Day #2

Scale: 1 inch = 20 feet



KENTUCKY RIVER MINE RESCUE CONTEST
DAY TWO

SUPERINTENDENT STATEMENT

Thank you for coming to assist us. You are located in the fresh air base of the Riverside #1 mine. This mine has two mining sections. Last night, a five man repair crew went to the 2nd Right mining section to work on the equipment and set a water pump. About 5:00 am, the outside man heard a loud noise coming out of the portals and the blowing fan appeared to go into stall. He tried to contact the 2nd Right section but got no response. The tracking system showed all five men to be on the section immediately before the incident. He contacted me, and then he got all the men from the 1st Left section out of the mine. I contacted all authorities.

Previous mine rescue teams explored up to this area where you are located and established a fresh air base. The rest of the mine has been explored and can be ventilated through.

This mine has a history of methane and bad roof. There is one location on this section that has accumulations of water. The mine fan is on and is being monitored and guarded. The fan blows air into the right side of the fresh air base and exits out the left side. The fan cannot be reversed or stopped.

There is electrical power on the pump switch in the fresh air base, but all electrical power inby this fresh air base is off.

After the team goes underground, the Briefing Officer will be stationed in a hardened room that has its own fresh air supply from the surface. When the door is closed, the room will be airtight.

Back-up mine rescue teams are available should you need help. A life-line person is provided to take your signals. All authorities are on-site.

Good luck!

PROBLEM

ACCOUNT FOR ALL MISSING MINERS

BRING SURVIVORS TO THE FRESH AIR BASE

INFORM THE SUPERINTENDENT WHICH TEAM MEMBER HAS THE LOWEST OXYGEN LEVEL DURING EVERY APPARATUS CHECK

CAPTAIN MUST TURN OVER ALL FACE-DOWN PLACARDS BEFORE PASSING THEM

YOUR TEAM CAN ONLY CARRY TWO BRATTICE CLOTHS AT A TIME WHILE TRAVELING

YOUR TEAM HAS 75 MINUTES TO COMPLETE YOUR WORK BEFORE ANOTHER TEAM TAKES YOUR PLACE

APPARATUS CHECK LOW MAN

FRESH AIR BASE CHECK _____
50 FOOT CHECK _____
THIRD CHECK _____
FOURTH CHECK _____
FIFTH CHECK _____
SIXTH CHECK _____
SEVENTH CHECK _____
EIGHTH CHECK _____
NINTH CHECK _____
TENTH CHECK _____

2 ENTRY BARRICADE
PATIENT STATEMENT

HELP ME!
I AM ALONE IN HERE. IT IS AIRTIGHT BEHIND ME.

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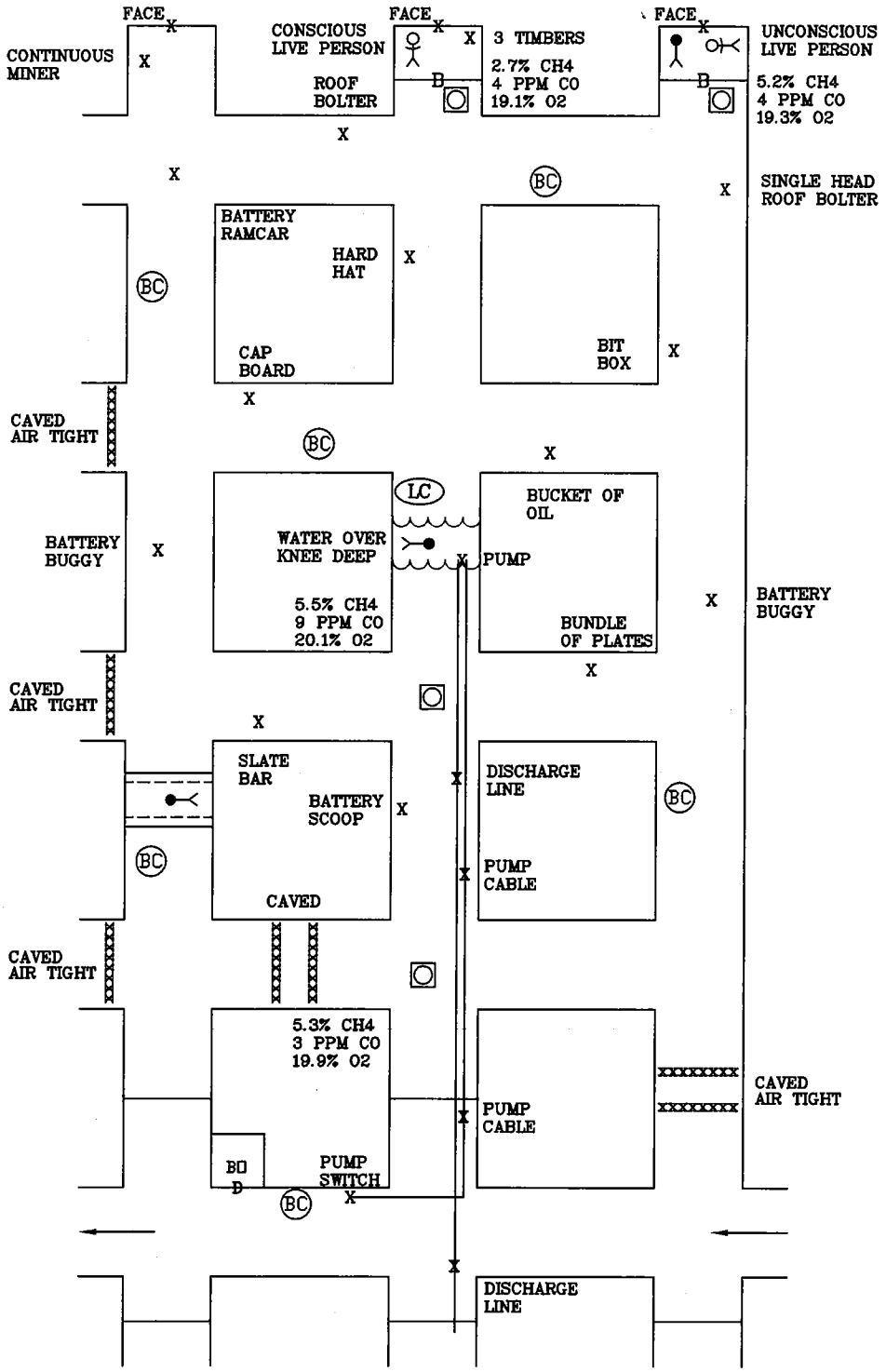

TEAM STOP

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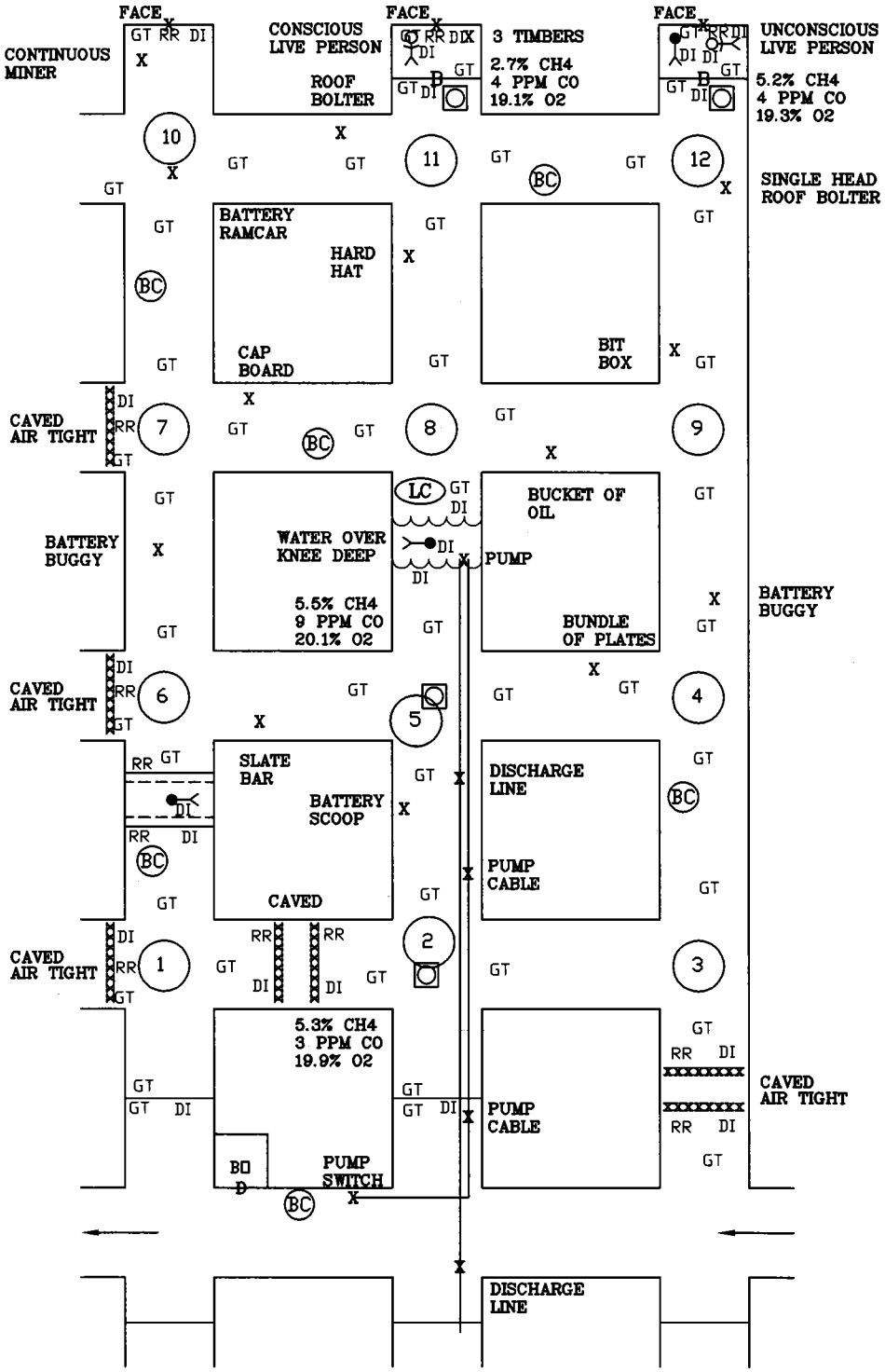

KENTUCKY RIVER MINE RESCUE CONTEST
JUNE 14, 2012

JUDGE'S BRIEFING

Fresh Air Base Exploration

After the clock has been started, the teams will explore the openings to the section. The teams can explore the openings in any order. For this briefing, the teams will start in the # 1 opening. The teams will find a temporary stopping. The captain must DI at the stopping, and a GT must be made at the stopping. In the # 2 opening, the teams will find another temporary stopping. The captain must DI at the stopping, and a GT must be made at the stopping. In the # 3 opening, the team will find a caved airtight area. The captain must do a RR test and DI at the caved airtight area, and the team must make a GT inby the opening. Teams will be ready to airlock to go into the mine now. The teams can go into either the # 1 or the # 2 entry. For this briefing, we will follow the team up the # 1 entry. Once the entire team is airlocked in, the 50 foot apparatus check must be conducted before the team advances further inby. The captain must take a GT inby the temporary stopping when it is breached.

At this time the briefing officer must be isolated from the team for the remainder of the problem.

Note: At all apparatus checks, the superintendent must be informed of which team member had the lowest oxygen level.

Team Stop # 1
The team will advance to the intersection in the first line of crosscuts inby the FAB. The team will find a caved airtight area in the opening to the left, a caved area in the crosscut to the right, and unsafe roof in the entry inby the intersection. The captain must do a RR test and must DI at all three areas, and a GT must be made inby each of the three openings.

Team Stop # 2
Teams must airlock back out of the section, and airlock in the # 2 entry. Once the temporary stopping is breached, the captain must take a GT. The team will advance to the intersection in the first line of crosscuts. The team will find an explosive mixture in the intersection, and the backside of the caved area in the crosscut to the left. The captain must do a RR test and must DI at the caved area, and a GT must be made in all three openings from the intersection.

Team Stop # 3
Team will advance/tie across to the intersection in the # 3 entry. The team will find the backside of the caved airtight area outby the intersection. The captain must do a RR test and must DI at the caved area. A GT must be made inby and outby the intersection.

Team Stop # 4
Team will probably advance up the # 3 entry to the intersection in the second line of crosscuts inby the FAB. Team will take a GT inby and to the left of the intersection.

Team Stop # 5
Team will travel across to the intersection in the # 2 entry. Team will find an explosive mixture in the intersection, and an area of water over knee deep in the entry inby the intersection. The captain must DI at the water over knee deep. A GT must be made in all three openings.

Team Stop # 6
Team will travel across to the intersection in the # 1 entry in this line of crosscuts. Team will find a caved airtight area in the opening to the left, and the backside of the unsafe roof in the entry outby the intersection. The captain must do a RR test and must DI at both areas, and a GT must be made in all three openings. NOTE: The placard for the body will be facedown. The team cannot consider the location of the body in the unsafe roof as being known, since the captain has not explored into the unsafe roof yet.

Team Stop # 7
Team will probably travel up the # 1 entry to the intersection in the third line of crosscuts inby the FAB. The team will find a caved airtight area in the opening to the left. The captain must do a RR test and must DI at the caved airtight area, and a GT must be made in all three openings.

Team Stop # 8
Team will tie across to the intersection in the # 2 entry in this line of crosscuts. The team will find the backside of the water over knee deep in the entry outby the intersection. The captain must DI at the water over knee deep. A GT must be made in all three openings. NOTE: The placard for the body will be face down. The team cannot consider the location of the body in the water over knee deep as being known, since the captain has not explored into the area yet.

Team Stop # 9
Team will tie across into the intersection in the # 3 entry. Team will take a GT in the entry inby and outby the intersection.

Team Stop # 10
For purpose of this briefing, the team will travel back to the # 1 entry and advance in the # 1 entry to the intersection in the fourth line of crosscuts inby the FAB. Team will find an opening to the left and a face inby the intersection. The captain must do a RR test and must DI at the face, and a GT must be made at the face. A GT must also be made in the openings to the left and right of the intersection.

Team Stop # 11
Team will tie across to the intersection in the # 2 entry. The team will find a barricade in the heading inby the intersection. When the team enters the intersection, the conscious live person inside the barricade will start yelling for help. There is an irrespirable atmosphere in front of the barricade, so it must be ventilated before it can be breached. The captain must DI at the barricade, and a GT must be made at the barricade and in the openings to the right and outby the intersection.

Ventilation # 1
At this time, if the team has explored as discussed, the barricade can be ventilated. See VENTILATION # 1. After the team has ventilated the barricade, the barricade can be breached. No airlock is required since the live person provided adequate information. The captain must make a GT after the barricade is breached. Inside the barricade, the team will find a conscious live person, three timbers, and a face. The captain must touch the patient and DI at the patient. A patient assessment must be conducted on the conscious live person. The captain must do a RR test at the face and DI at the face, and a GT must be made at the face. The team must now bring the patient to the FAB.

Team Stop # 12
The team will travel to the intersection in the # 3 entry in the fourth line of crosscuts inby the FAB. Here the team will find a barricade with an explosive and irrespirable atmosphere in front of it. There is no response from behind the barricade. The captain must DI at the barricade and a GT must be made at the barricade. A GT must be made in the other opening, depending on direction of team travel.

Ventilation # 2
The team will have to ventilate the explosive/irrespirable atmosphere. The team will first have to clear the explosive mixtures over the pump cable so the pump can be energized to remove the water over knee deep. The team will have to set timbers through the unsafe roof in the # 1 entry. Here the team will find a body. The captain must touch the body and DI at the body, then finish timbering through the area. See VENTILATION # 2. After the explosive mixtures are removed and the water is pumped down, the captain must

explore through the area. Here he will find a body. The captain must touch the body and DI at the body.

Ventilation # 3

The team can now ventilate the barricade in the # 3 heading. See VENTILATION # 3. After the barricade is ventilated, an airlock must be constructed since there is no response behind the barricade. Once the barricade is breached, the captain must make a GT inby the barricade. The team will find an unconscious live person and a body inside the barricade. There is also a face inside the barricade. The captain must touch both the body and the unconscious live person, and must DI at both missing miners. A patient assessment must be conducted on the unconscious live person. The unconscious live person must be placed on a stretcher and brought to the FAB that way. The captain must do a RR test at the face and must DI at the face, and a GT must be made at the face. At this time the team can bring the missing miner to the FAB. Since it is airtight behind the barricade, the airlock can be torn down. Once the team is at the FAB, the captain can stop the clock.

Ventilation #1

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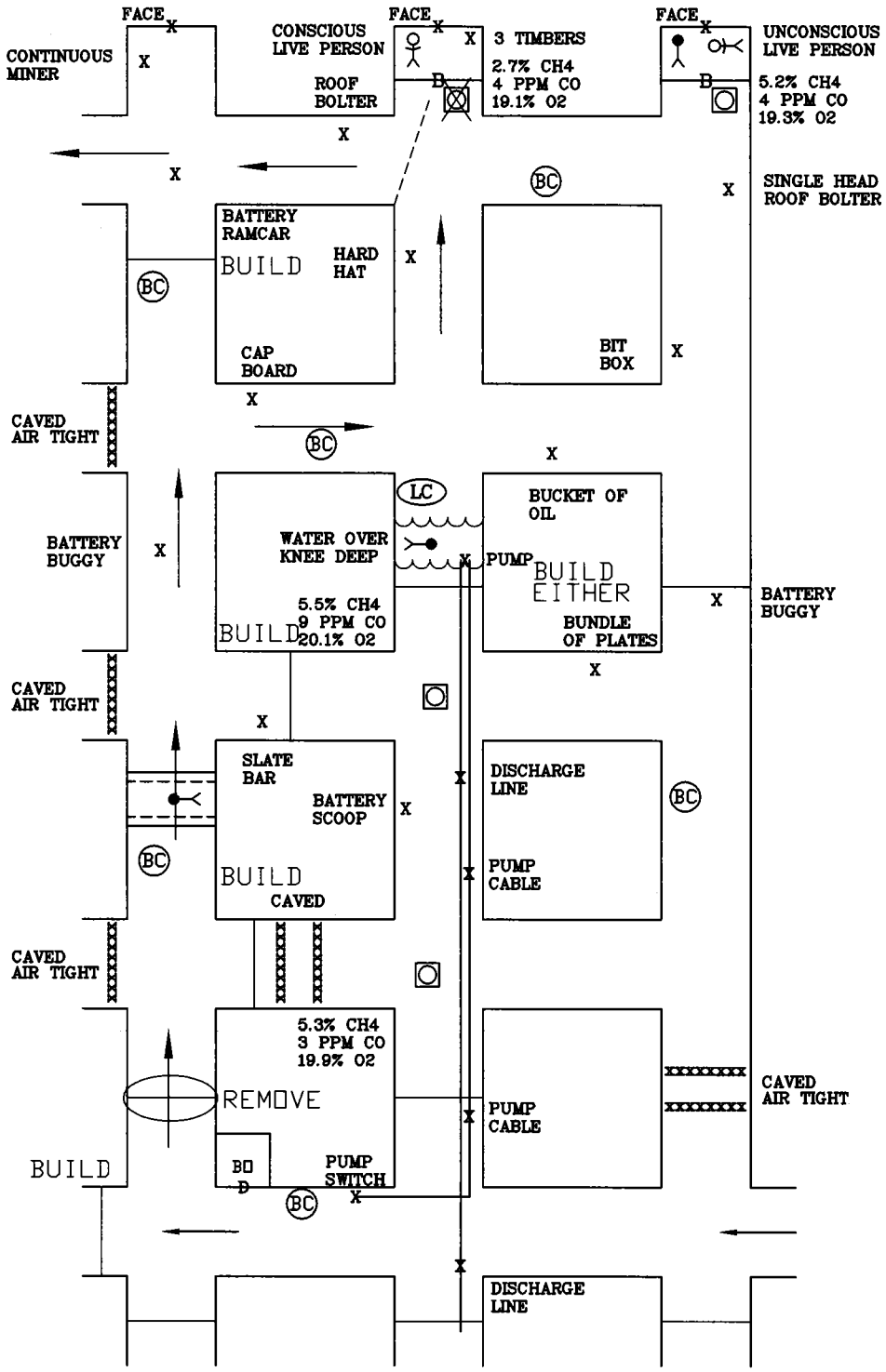

Ventilation #2

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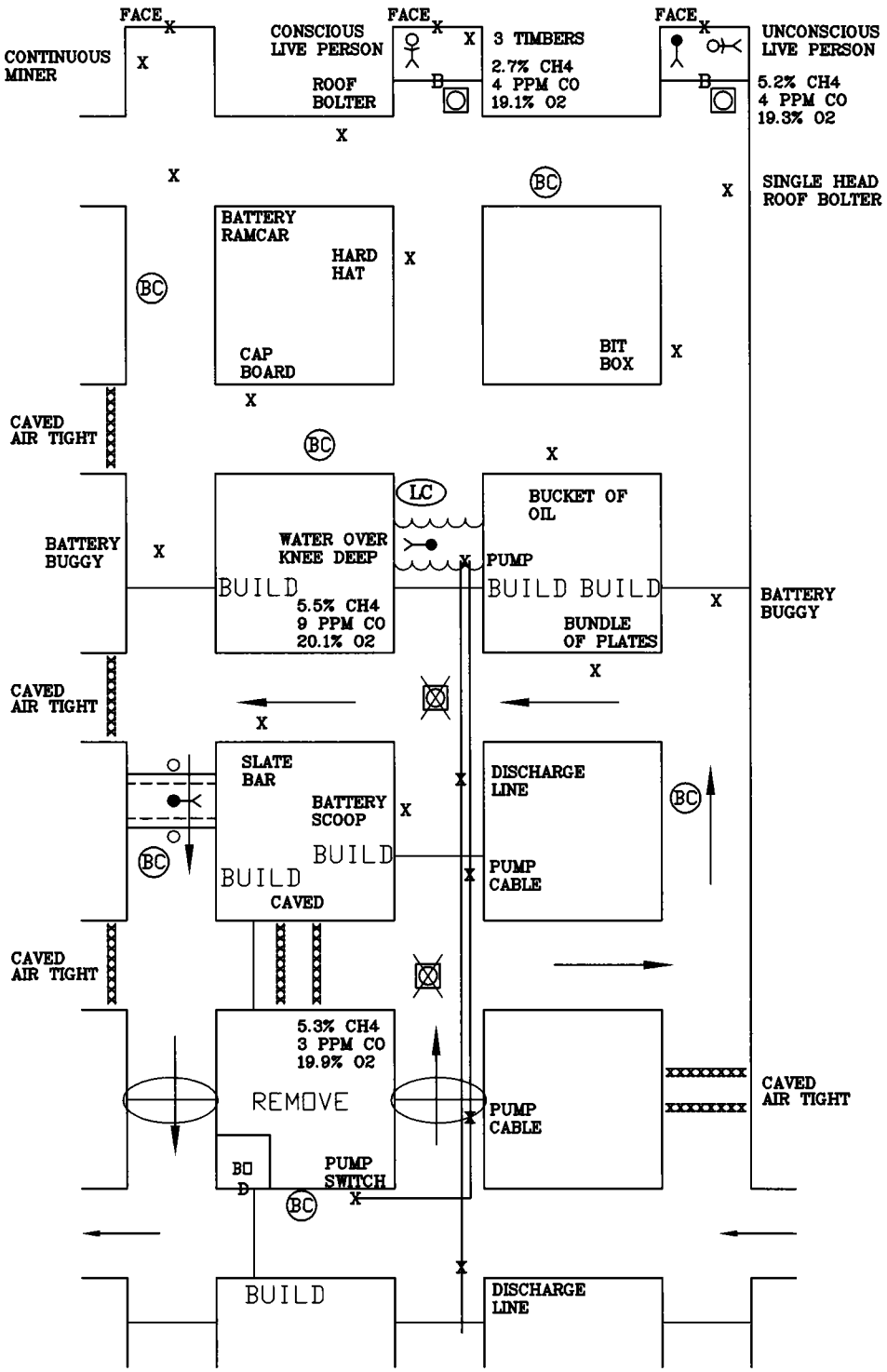

Ventilation #3

Scale: 1 inch = 20 feet