

**KENTUCKY RIVER MINE RESCUE CONTEST
SUPERINTENDENT STATEMENT DAY 1
JUNE 18, 2014**

Thank you for coming to help us. You are located at the fresh air base of the Hazco #1 mine. This is a very large mine with multiple working section and interconnected fans and air courses.

This morning 75 miners entered the mine. Around 9:00 am this morning the incident occurred. There was a loud rush of air out the portals and the CO system alarmed. The Responsible Person tried to contact the miners underground but was not able to contact anyone. We reported this to MSHA and contacted mine rescue teams. At 10:30 am forty nine miners were able to escape. The other 26 miners are unaccounted for. There are multiple mine rescue teams working different areas of the mine at the same time you will be working. Teams are working bare face out-by. The fan you are working with is running. The air is currently going across the fresh air base and the return has been established so you can send smoke, and any gases out and they will not travel over any ignition source or unexplored area.

The mine has a history of bad roof, water and methane. The mine maps are up to date. We have a competent life line person to give and take life line signals if necessary. There are back up and standby teams ready to assist you.

Once your team goes in-by, the Briefing Officer will be stationed in an airtight isolation area and you will only be able to contact him through your communication system.

You will be given two maps you are to denote which one is the Team map and which one is the Briefing Officer map.

Please find the 7 missing miners that were in this area of the mine that you will be exploring. Thank you and good luck.

PROBLEM

THE FAN YOU ARE WORKING WITH CAN BE TURNED OFF, REVERSED BUT CANNOT BE STALLED DUE TO CAUSING DAMAGE TO THE FAN.

THE RETURN AND INTAKE OUTBY THE FAB HAS BEEN EXPLORED AND IS SAFE TO VENTILATE THROUGH.

ACCOUNT FOR ALL MISSING 7 MINERS AND BRING SURVIVORS TO THE FAB

EXPLORE ALL AREAS OF THE MINE THAT CAN BE DONE SAFELY

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

YOU HAVE 105 MINUTES TO WORK BEFORE BEING REPLACED BY ANOTHER TEAM

**PATIENT STATEMENT
BARICADE**

HELP!! GET ME OUT

Written Examination Day 1 Kentucky River

Team Name _____ Contestant Name _____

1. Under no circumstances will the team ever alter ventilation without orders to do so from the _____. (MSHA 3028, pp. 3-3)
 - A. ___ Briefing Officer
 - B. ___ Command Center
 - C. ___ Mine Superintendent

2. High temperatures (or heat) cause gases to expand, so they diffuse more _____. (MSHA 3028, pp. 2-6)
 - A. ___ Rapidly
 - B. ___ Easily
 - C. ___ Quickly

3. The Command Center considers several factors before it orders a change in ventilation, most importantly; it has to consider how the _____ will affect ventilation into an unexplored area. (MSHA 3028 pp. 3-16)
 - A. ___ Changes
 - B. ___ Alterations
 - C. ___ Pressures

4. A dangerous and sometimes fatal mistake that _____ make is entering an unsafe or hazardous scene. (Brady First Responder, p. 165)
 - A. ___ Rescuers
 - B. ___ Responders
 - C. ___ Miners

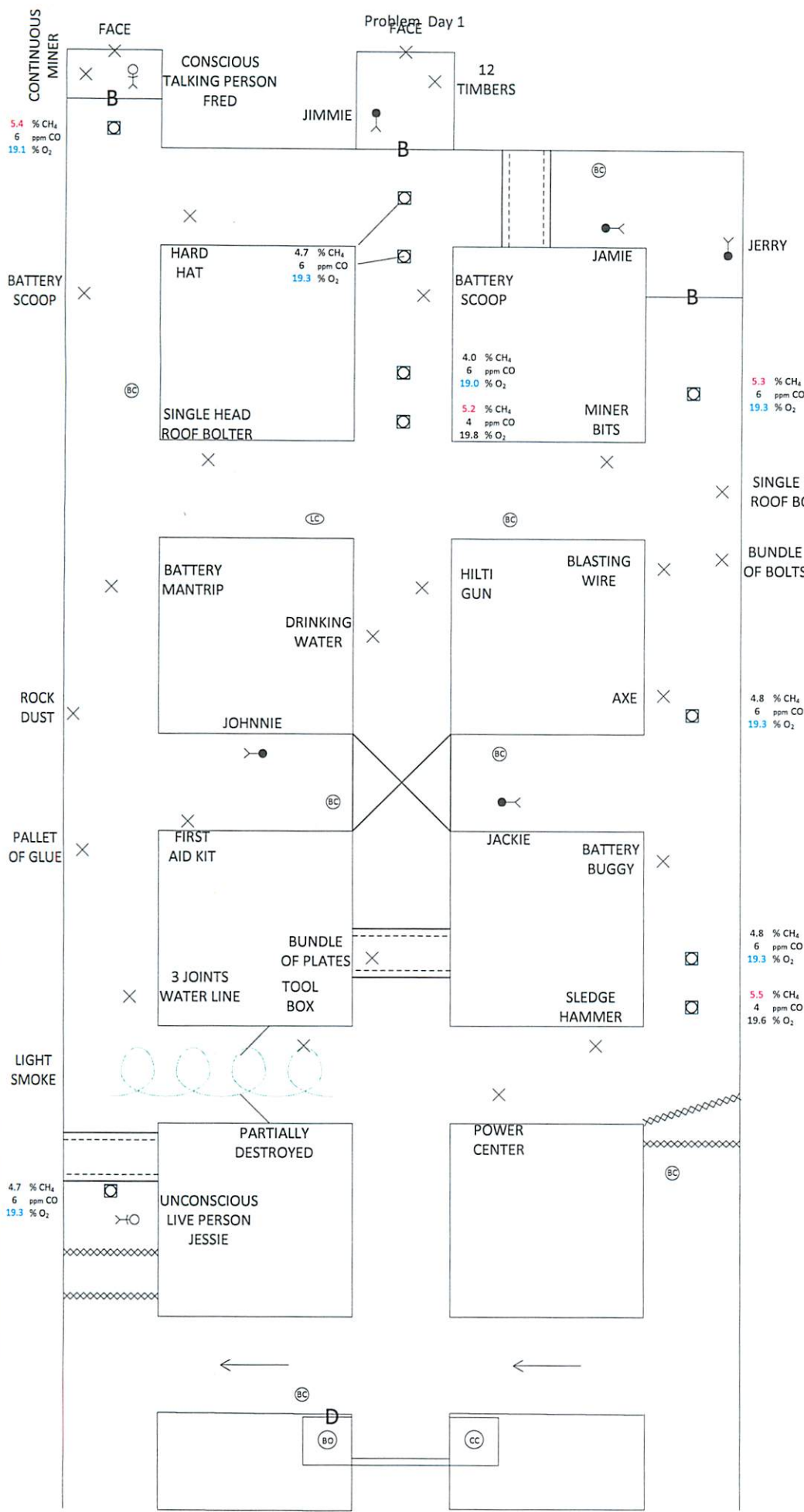
5. With the _____ open place your ear over the patient's nose and mouth, and watch for chest movement. (Brady First Responder, p. 172)
 - A. ___ Mouth
 - B. ___ Airway
 - C. ___ Throat

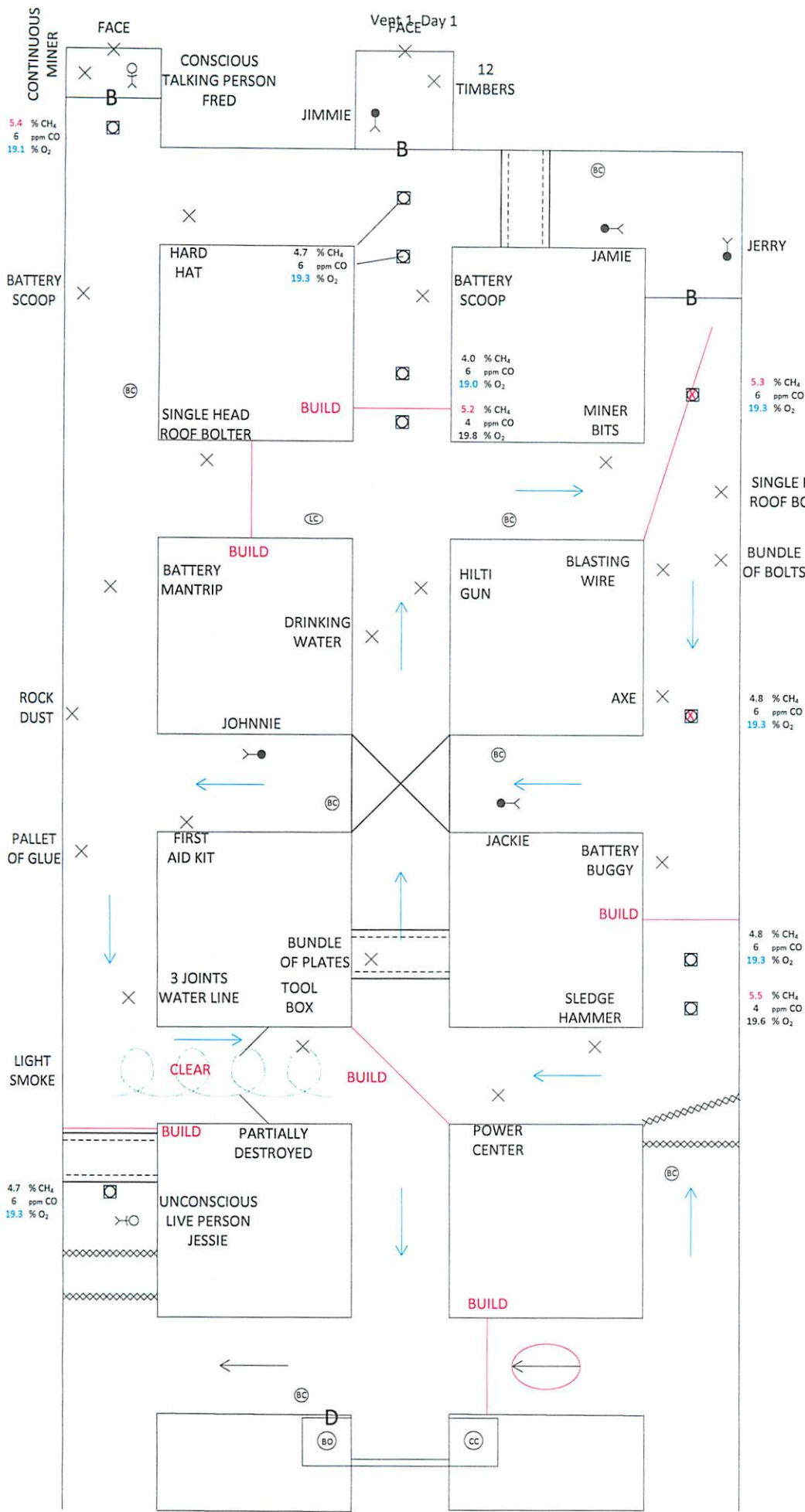
6. If the patient is not _____, check for a carotid pulse at the neck to determine if blood is circulating. (Brady First Responder, p. 174)
- A. ___ Responsive
 - B. ___ Breathing
 - C. ___ Choking
7. One of the first critical steps when fighting fire in a mine is to _____ water (preferably as fog) downstream (inby the fire) into the path of (as close as possible to) the oncoming flames. (Donald W. Mitchell Mine Fires, p. 5)
- A. ___ Spray
 - B. ___ Apply
 - C. ___ Put
8. _____ smoke rollback is a must because if you cannot control the rollback you probably can't get close enough to fight the fire effectively. (Donald W. Mitchell Mine Fires, p. 19)
- A. ___ Controlling
 - B. ___ Stopping
 - C. ___ Preventing
9. Gas layering is like smoke rollback with Methane and _____ the likely gases to form layers during a fire. (Donald W. Mitchell Mine Fires, p. 23)
- A. ___ Oxygen
 - B. ___ Hydrogen
 - C. ___ Ethane
10. The IDLH of _____ is 40,000 ppm. (NIOSH Chemical Hazards, p. 52)
- A. ___ Carbon Monoxide
 - B. ___ Carbon Dioxide
 - C. ___ Sulfur Dioxide

Written Examination Day 1 Kentucky River Answer Key

1. B Command Center
2. C Quickley
3. B Alterations
4. B Responders
5. B Airway
6. B Breathing
7. A Spray
8. B Stopping
9. B Hydrogen
10. B Carbon Dioxide

Problem Day 1





Vent 1 Day 1

CONTINUOUS MINER
FACE

BATTERY SCOOP

ROCK DUST

PALLET OF GLUE

LIGHT SMOKE

4.7 % CH₄
6 ppm CO
19.3 % O₂

CONSCIOUS TALKING PERSON FRED

JIMMIE

12 TIMBERS

HARD HAT

4.7 % CH₄
6 ppm CO
19.3 % O₂

BATTERY SCOOP

JAMIE

JERRY

SINGLE HEAD ROOF BOLTER

BUILD

4.0 % CH₄
6 ppm CO
19.0 % O₂
5.2 % CH₄
4 ppm CO
19.8 % O₂

MINER BITS

5.3 % CH₄
6 ppm CO
19.3 % O₂

SINGLE HEAD ROOF BOLTER

BUNDLE OF BOLTS

BUILD
BATTERY MANTRIP
DRINKING WATER
JOHNNIE

HILTI GUN
BLASTING WIRE
AXE
JACKIE

4.8 % CH₄
6 ppm CO
19.3 % O₂

FIRST AID KIT
BUNDLE OF PLATES
TOOL BOX
3 JOINTS WATER LINE

BATTERY BUGGY
SLEDGE HAMMER

4.8 % CH₄
6 ppm CO
19.3 % O₂

5.5 % CH₄
4 ppm CO
19.6 % O₂

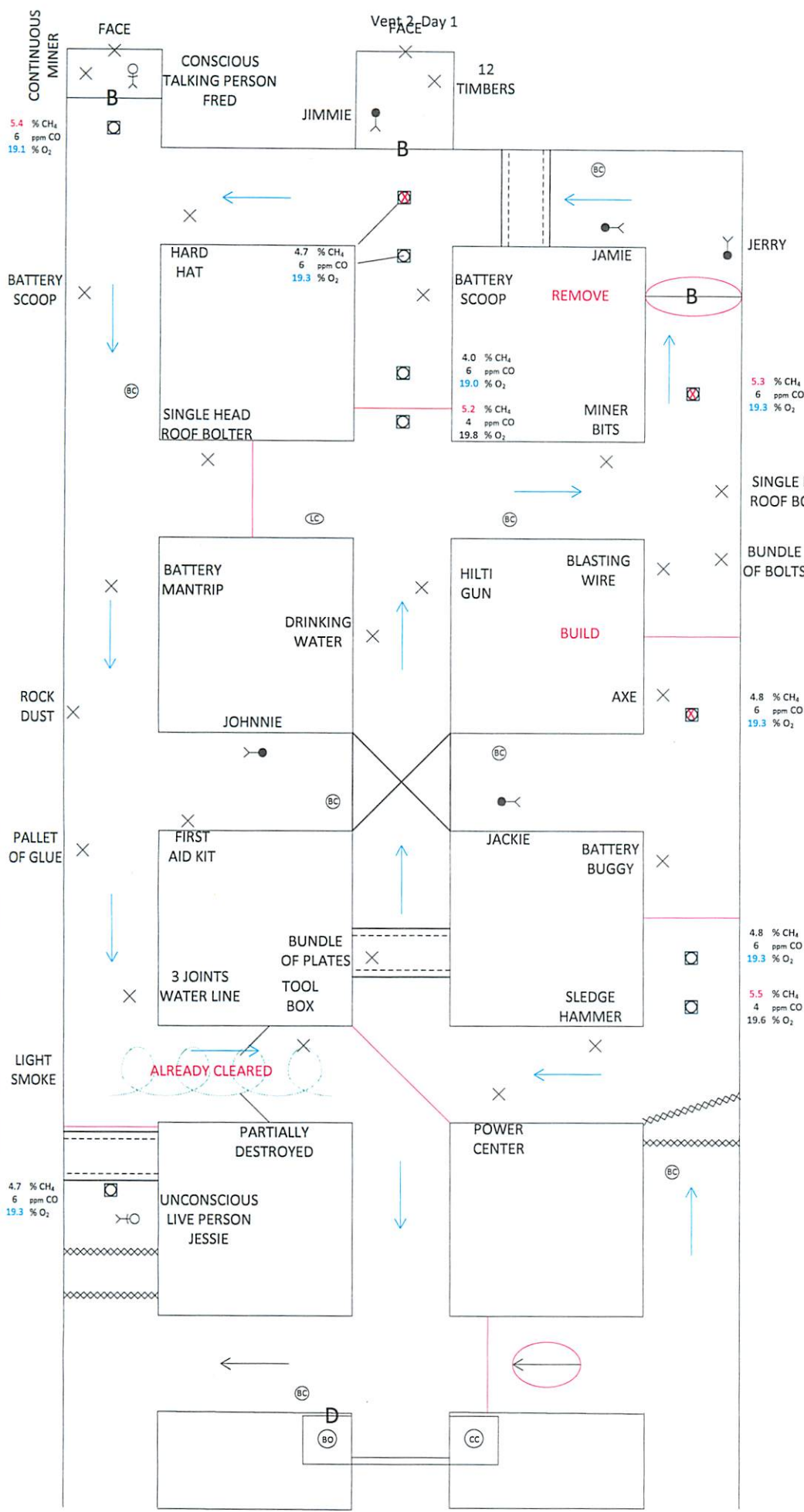
BUILD
PARTIALLY DESTROYED
UNCONSCIOUS LIVE PERSON JESSIE

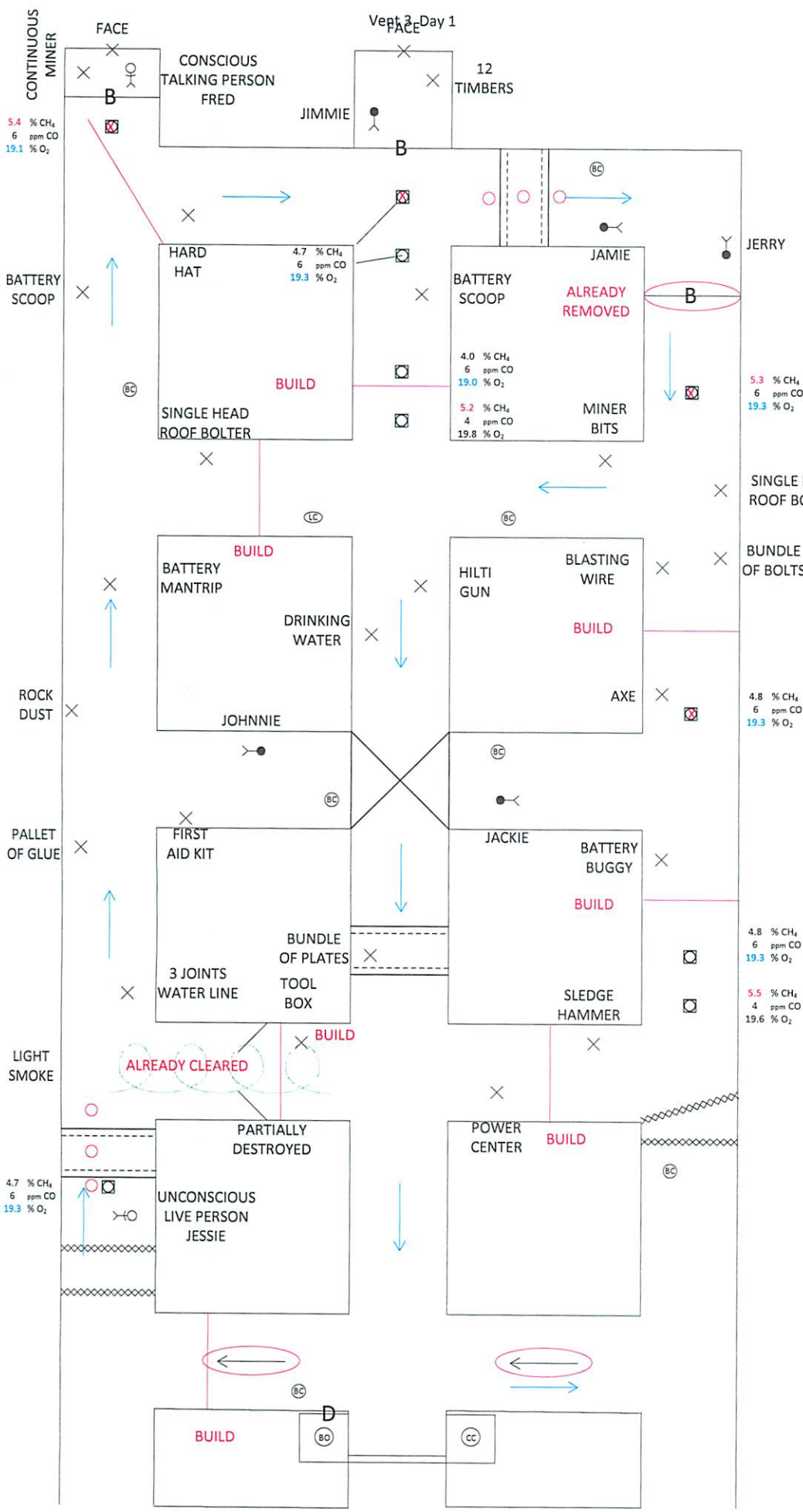
POWER CENTER
BUILD

4.7 % CH₄
6 ppm CO
19.3 % O₂

D

CC





CONTINUOUS MINER
5.4 % CH₄
6 ppm CO
19.1 % O₂

BATTERY SCOOP

ROCK DUST

PALLET OF GLUE

LIGHT SMOKE

4.7 % CH₄
6 ppm CO
19.3 % O₂

Vept 3 Day 1

FACE
CONSCIOUS TALKING PERSON FRED

JIMMIE

12 TIMBERS

HARD HAT
4.7 % CH₄
6 ppm CO
19.3 % O₂
BUILD
SINGLE HEAD ROOF BOLTER

BATTERY SCOOP
ALREADY REMOVED
4.0 % CH₄
6 ppm CO
19.0 % O₂
MINER BITS
5.2 % CH₄
4 ppm CO
19.8 % O₂

JERRY

5.3 % CH₄
6 ppm CO
19.3 % O₂

SINGLE HEAD ROOF BOLTER

BUNDLE OF BOLTS

BUILD
BATTERY MANTRIP
DRINKING WATER
JOHNNIE

HILTI GUN
BLASTING WIRE
BUILD
AXE

4.8 % CH₄
6 ppm CO
19.3 % O₂

FIRST AID KIT
BUNDLE OF PLATES
TOOL BOX
3 JOINTS WATER LINE
BUILD
ALREADY CLEARED

JACKIE
BATTERY BUGGY
BUILD
SLEDGE HAMMER

4.8 % CH₄
6 ppm CO
19.3 % O₂

5.5 % CH₄
4 ppm CO
19.6 % O₂

PARTIALLY DESTROYED
UNCONSCIOUS LIVE PERSON JESSIE
4.7 % CH₄
6 ppm CO
19.3 % O₂

POWER CENTER
BUILD

BUILD

D
BO

CC