

2016 Delta, Colorado Day 2

Written Statement

Thank you for coming back to our mine. Last night 4 miners were working in the south section, which is located off of the west area you helped us with yesterday, when power was lost and the mouth of the west section was flooded. We have had no contact with any of them today.

You have been brought to a new Fresh-Air-Base established early this morning.

We have installed an electric dewatering pump in the #2 entry and it will pump down the water in all 3 entries. Once the pump is turned on you will not be able to turn it off because the water will re-roof right away. The Briefing Officer can start the pump at a switch in the Command Center. The pump cannot be moved.

We were driving these rooms to tie in with an older part of the mine.

The map is not up to date, the surveyor's wife has been sick and he has missed a lot of work.

A Command Center has been set up outby the fresh air base.

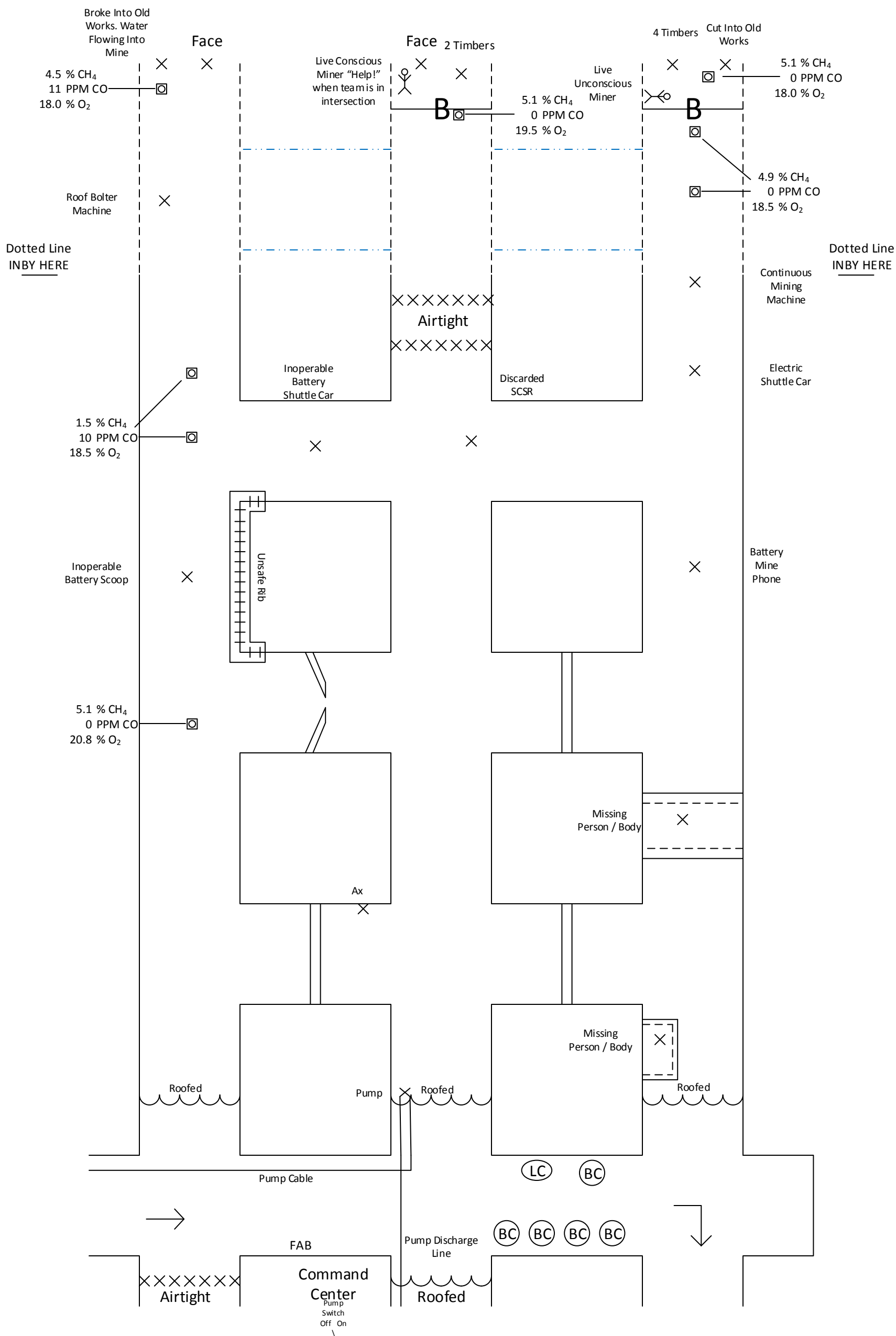
The fan on the surface is running, exhausting, guarded and cannot be reversed or stopped.

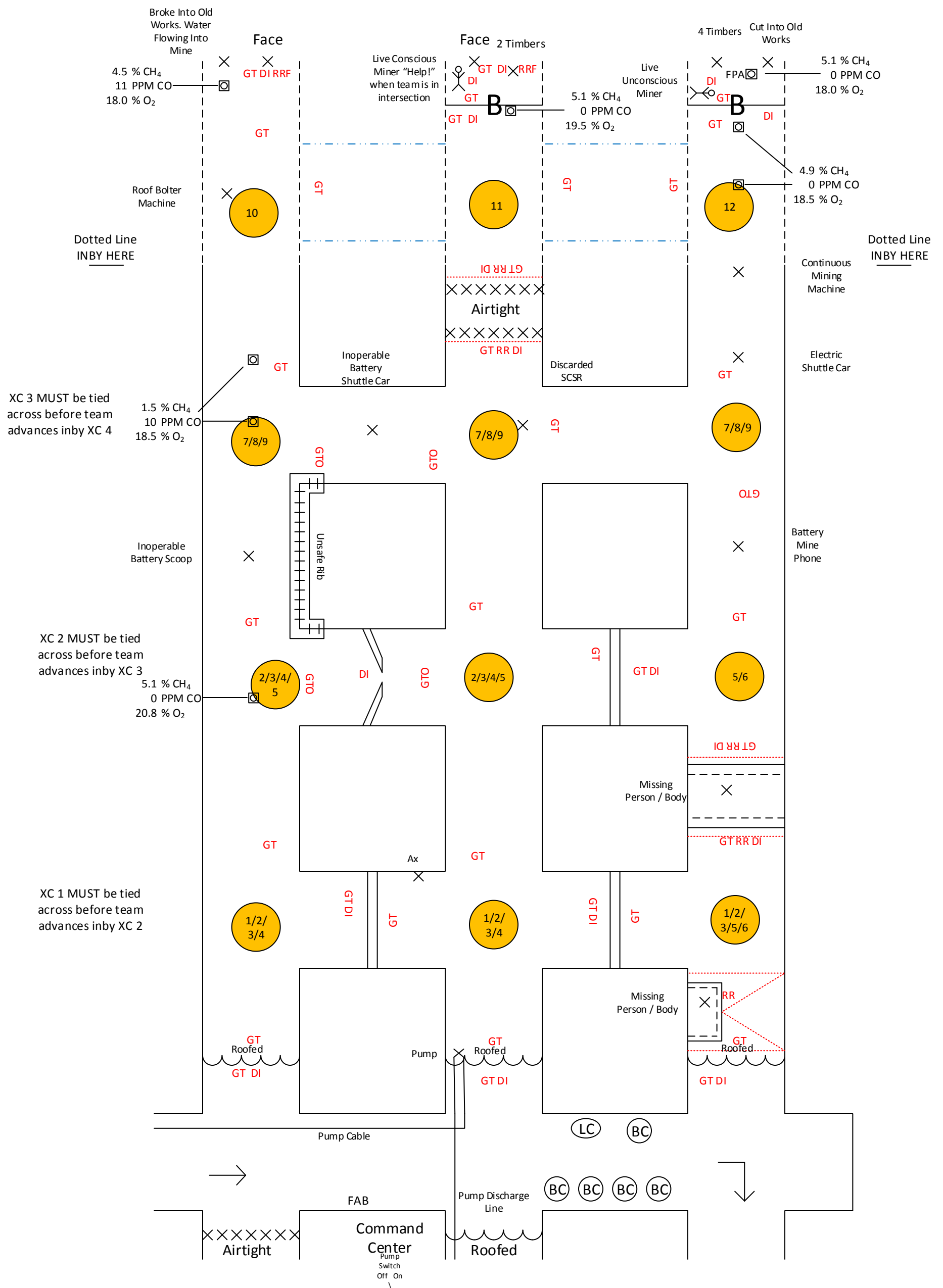
All officials and backup teams are present, however your team will be expected to do all work in this area.

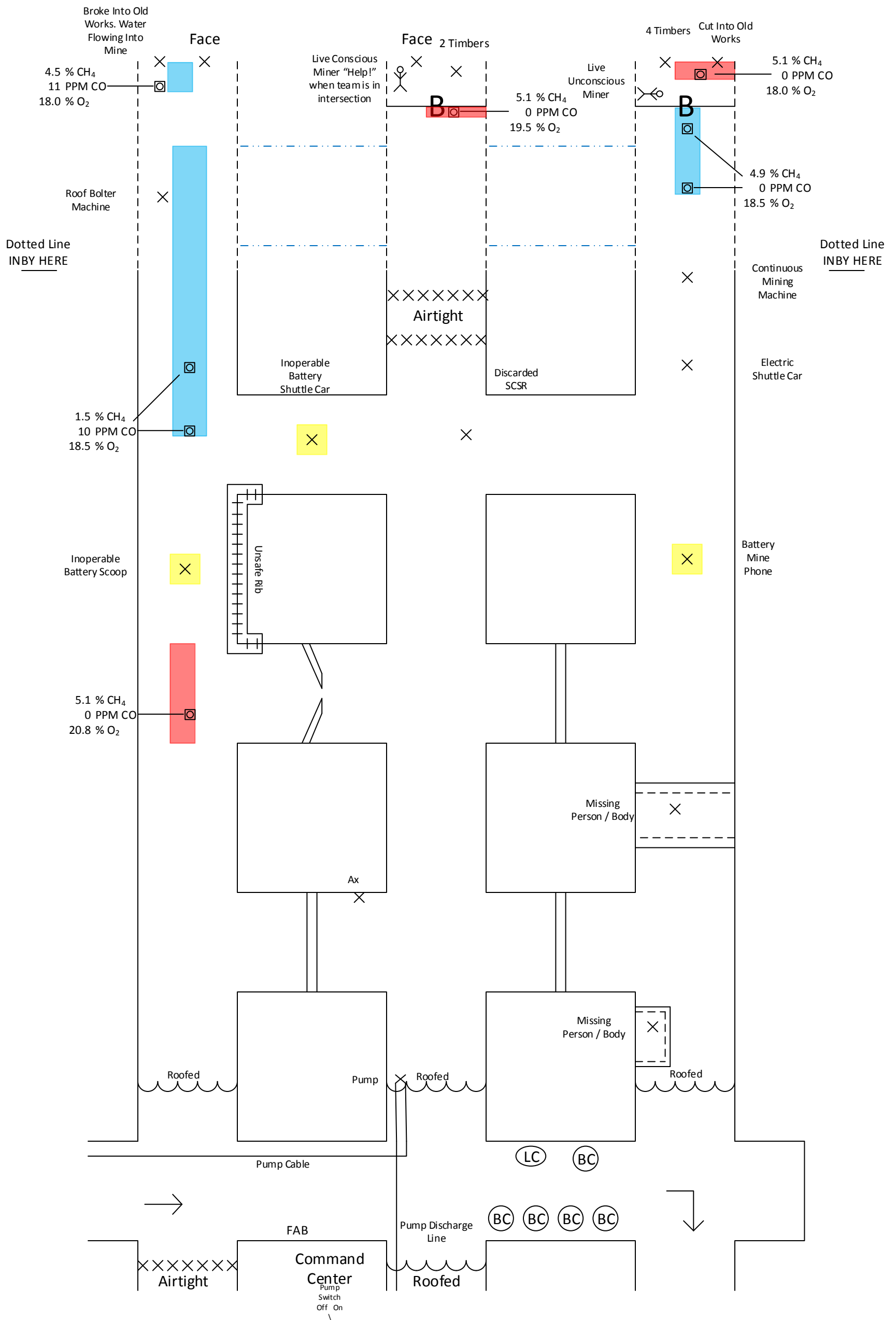
Delta, Colorado 2016 Day 2
Written Problem

Explore the entire mine that can be
done safely.

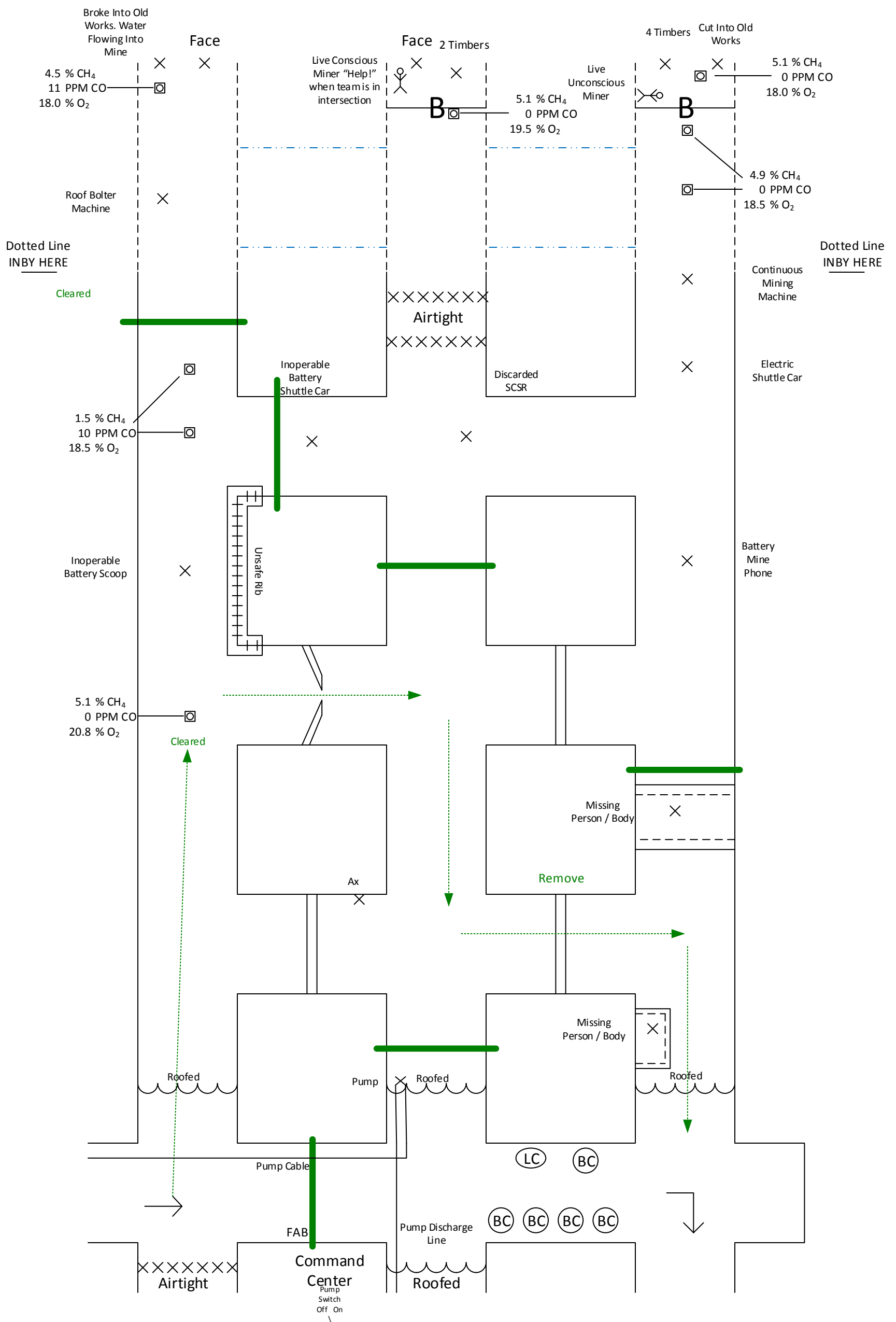
Bring all survivors to the Fresh-Air-
Base.



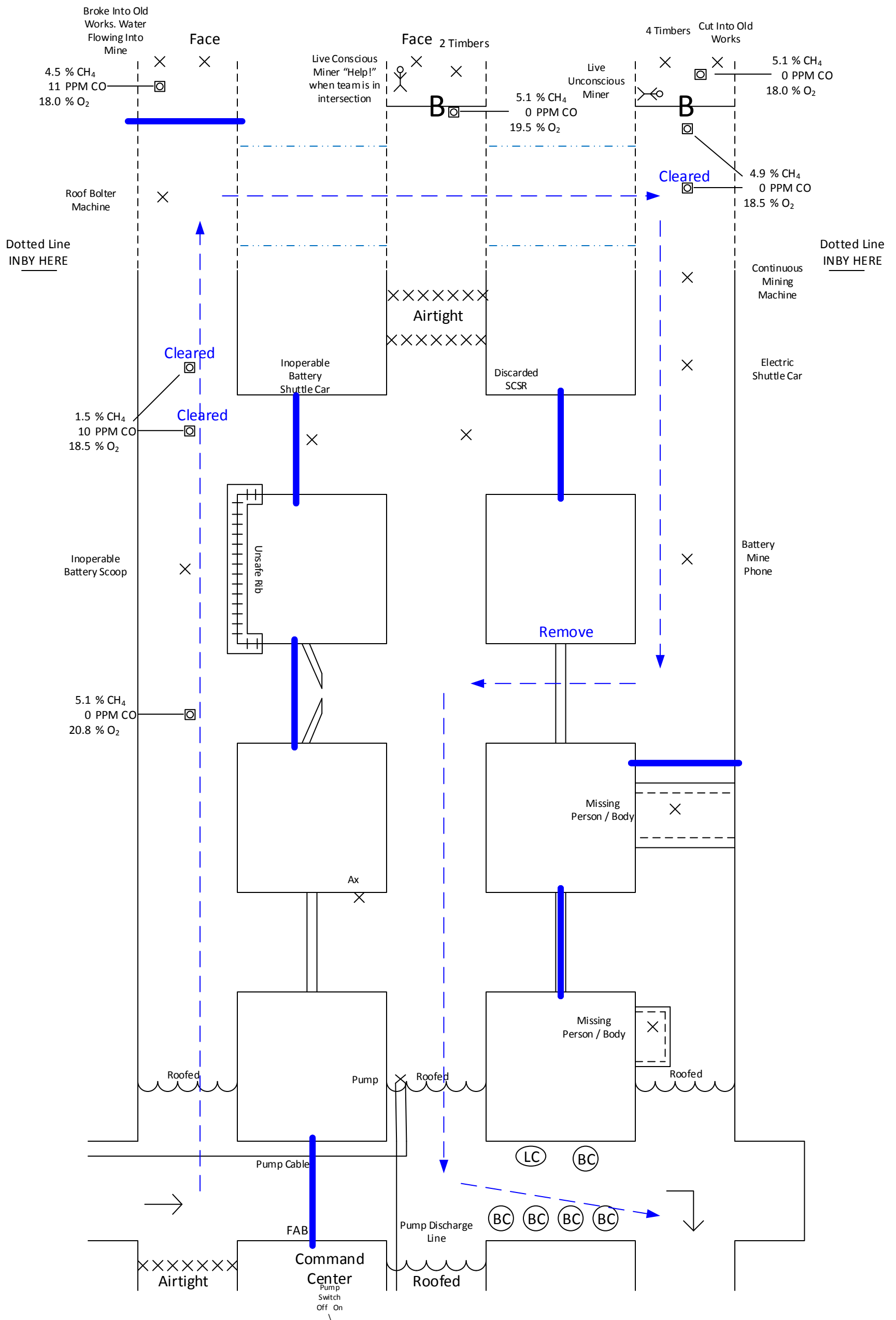




Vent 1



VENT 2



Broke Into Old Works. Water Flowing Into Mine
4.5 % CH₄
11 PPM CO
18.0 % O₂

Face

Face 2 Timbers

4 Timbers Cut Into Old Works

Live Conscious Miner "Help!" when team is in intersection

5.1 % CH₄
0 PPM CO
19.5 % O₂

Live Unconscious Miner

5.1 % CH₄
0 PPM CO
18.0 % O₂

Dotted Line INBY HERE

Dotted Line INBY HERE

Roof Bolter Machine

Cleared

Continuous Mining Machine

Inoperable Battery Shuttle Car

Discarded SCSR

Electric Shuttle Car

1.5 % CH₄
10 PPM CO
18.5 % O₂

Cleared

Cleared

Inoperable Battery Scoop

Battery Mine Phone

Unsafe Rib

Remove

5.1 % CH₄
0 PPM CO
20.8 % O₂

Missing Person / Body

Ax

Missing Person / Body

Roofed

Roofed

Roofed

Pump Cable

Pump

Pump

FAB

Pump Discharge Line

LC BC

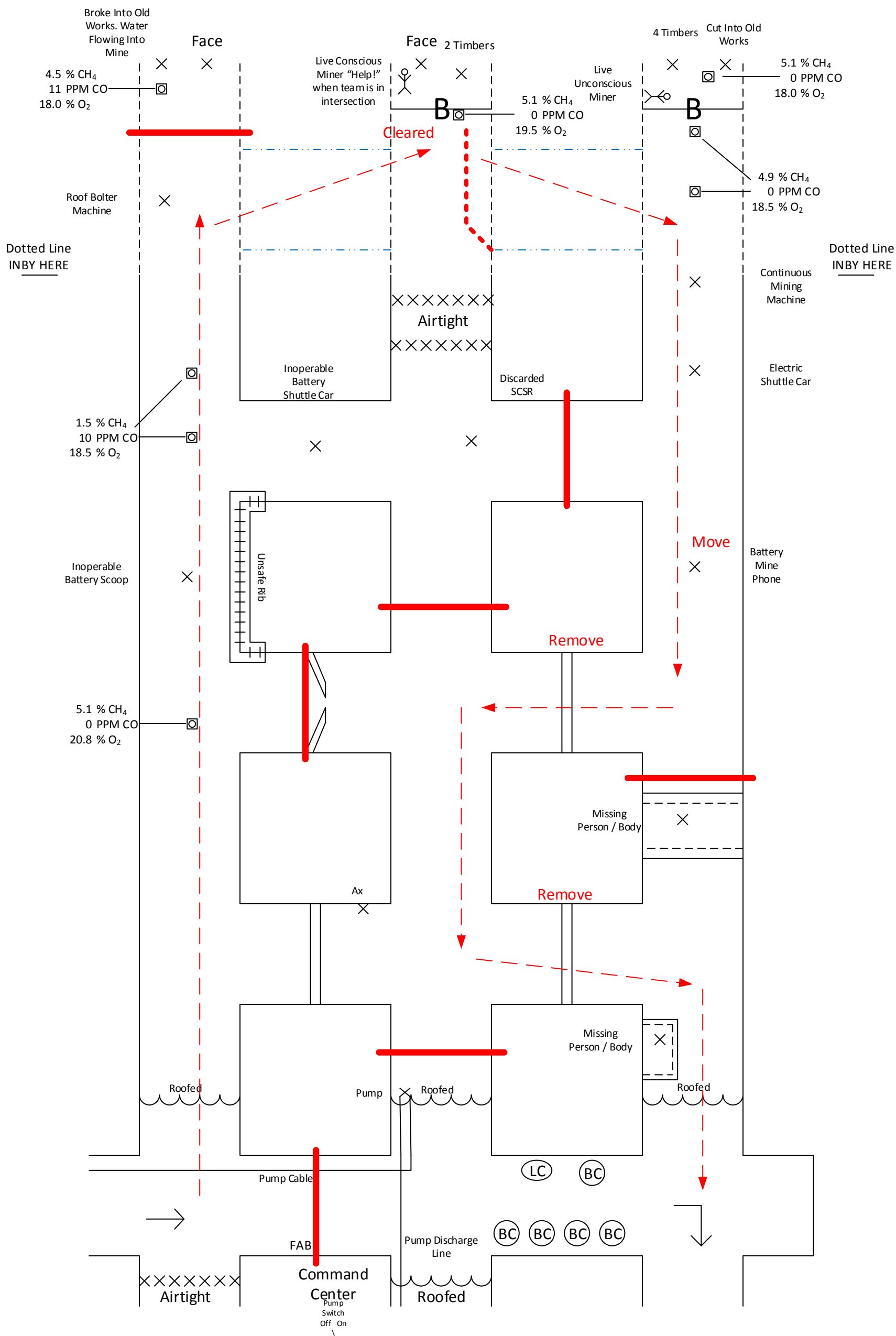
BC BC BC BC

Command Center
Pump Switch
Off On

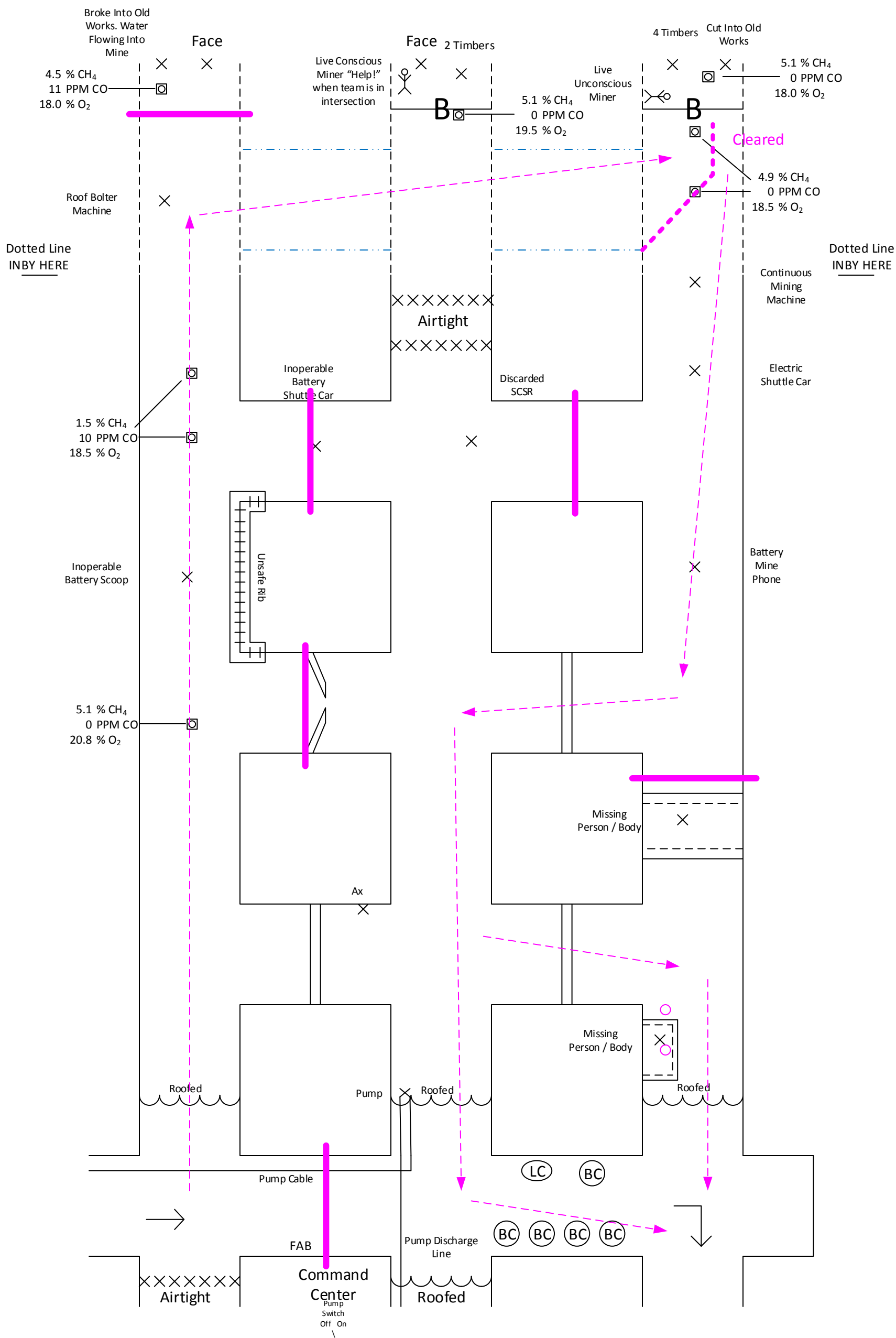
Airtight

Roofed

VENT 3



VENT 4



Delta, Colorado Day 2 2016 Judges Instructions

1. Initial opening checks of each entry. Water roofed in all 3 entries.

Teams MUST build temporary in each entry and airlock the entry they will begin exploring into.

Team must get permission to energize pump. Command Center starts pump using switch in CC.

2. Team Stop 1, 2 and 3 can be in 1, 2 or 3 entries or inby to xc 2 in 1 or 2e. Apparatus check required at first team stop.

Inby fab in 3 entry, missing person can be seen in unsafe roof along rib. No timbers available to timber into and assess.

Team can travel to xc 2, in 1 or 2 entries.

Before team advances inby xc 2, xc 1 must be tied across.

Team Stops 4, 5 and 6 and 7, 8 and 9 can be in any order as long as team has tied across xc 2 prior to advancing inby xc 3.

Team Stop 10 in 1 entry Must be as shown due to gas in 1 entry.

Team stop 11 in 2 entry at xc 2 barricade found with response from LCM when team is in intersection. Not enough information to ventilate yet.

Team stop 12 in 3 entry in xc 4. 2nd barricade found with no response.

Old works known in 1 e, explosive gas in 2 e known. Team has enough materials and information to ventilate 1st then 2nd barricades.

Vent 1 - team must vent explosive gas in 1 entry at xc 2 safely by venting out 3 e. Building temp. stoppings; in 3e inby xc 3, in 3 xc between 1 and 2 e, in 2 e between xc 2 and 3, in 2 e between fab and xc 1, remove stopping in xc 1 between xc 2 and 3, build inby or outby the unsafe roof in 3 entry between xc 2 and 3, and in FAB between 1 and 2 e (vent change).

Vent 2 – team can vent up 1 e. Build in xc 2 between 1 and 2e, xc 3 between 1 and 2 e, 1 e inby xc 4, xc 3 between 2 and 3e, remove stopping in xc 2 between 2 and 3e, in xc 1 between 2 and 3 e, and in FAB between 1 and 2e (vent change).

Vent 3 – Team can wing barricade in 2 e using LC but must prevent explosive gas from going over battery phone in 3e (move) and through unsafe roof in 3 entry and prevent it from going over energized pump cable in FAB at 2 e. Barricade can be breached but must be airlocked into. Pt. can be walked out.

Vent 4 - Team can wing barricade in 3 e using LC but must prevent irrespirable gas from going through unsafe roof in 3 e. Barricade can be breached but must be airlocked. Team should discover explosive mixture inby barricade. QUITTER!! Due to the 11 ppc CO in 1 e inby xc 4 and dotted line map.

LUM can be brought out on stretcher.

End of Problem