



2015 Northern
Nevada Regional
Mine Rescue
Contest
Winnemucca
Events Center
Winnemucca, NV
March 11 & 12

Welcome to the 2015 Northern Nevada Regional Mine Rescue contest and thank you for coming!

This document is designed to help you understand the events that will take place over the next few days.

The contest began on March 10th when the teams arrived. The teams dropped off their equipment and started to ready the equipment they will use over the next two days.

During the evening of the 10th all of the team members took written tests to check their knowledge of mine rescue practices, first-aid, and maintenance of the equipment they use. Following the test the team captains, NvMR Association leadership, and MSHA met to discuss the ground rules for the field and skills competition.

Today at 7:00 a.m. the teams began the competition. All of the teams will work through a simulated mine emergency. The fields and the problems are the same, but how each team will work their way through the problem will typically be quite different.

The NvMRA has added a smoke chamber to this year's event. Once the teams leave the field they have the opportunity to search through the chamber. The winner of this event will win a trophy.

We hope you will stop by tomorrow to encourage your favorite team(s) on.

Thanks again for coming!

For 2015

The National Mine Rescue Rules Committee has made significant changes to the rules used at contests around the country. The problem they will encounter here incorporates the changes.

The Team Briefing Statement

Your team has reported to the Fresh Air Base on the 825 shaft station at the #1 shaft. According to the Mine Manager, Bill Ihn, an explosion occurred on the 1035 level in the mechanic's shop at about 9:30 a.m. this morning. Shortly after the explosion heavy smoke was observed coming out of the #2 shaft. In a bit of panic the main fan was shut off to try and stop the spread of the fire. Gas readings were taken at the exhaust (#2) shaft earlier. The person taking the readings found high levels of CO, elevated NO₂ and low oxygen.

Today is a down day, so the only people in the mine are working in the shops on the 1035 level.

The teams will need to do the following to successfully complete the problem.

- Explore and map the mine
- Locate and evacuate living miners to waiting EMS
- Seal or extinguish any fire(s)
- Assess the condition of ventilation controls

Mine Information

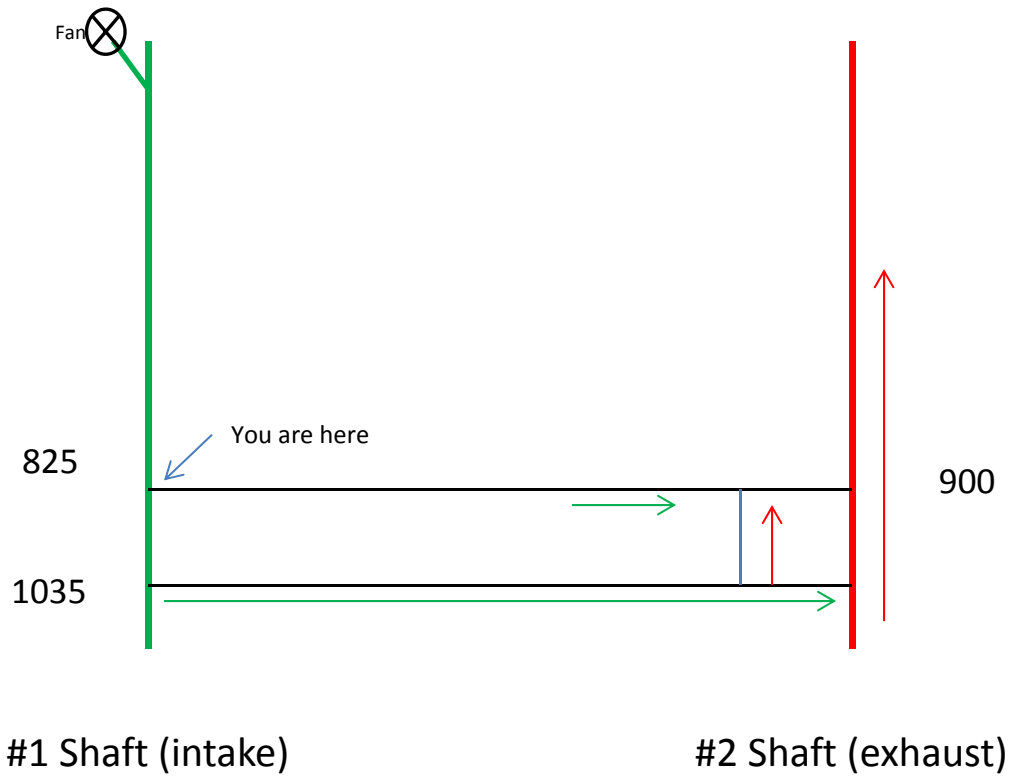
- Wicked Witch Mine – Mother In Law Mining LLC – MSHA ID #04-00000
- Multi-level, Shaft Mine
- Benitoite mine
- Downcast ventilation through fan in #1 shaft
- Rubber tire equipment
- Category VI – non-gassy
- Explosives stored & used underground
- Power – Off & guarded
- Fans – Off - the main fan is reversible, but will take some time to get it that way.
- Shafts – Guarded
- Authorities – Notified, the mine is under a 103(k) order, so plans & activity will have to go through the command center.
- Five miners are unaccounted for.
- Back up teams are on site, but will not be able to help during the problem.

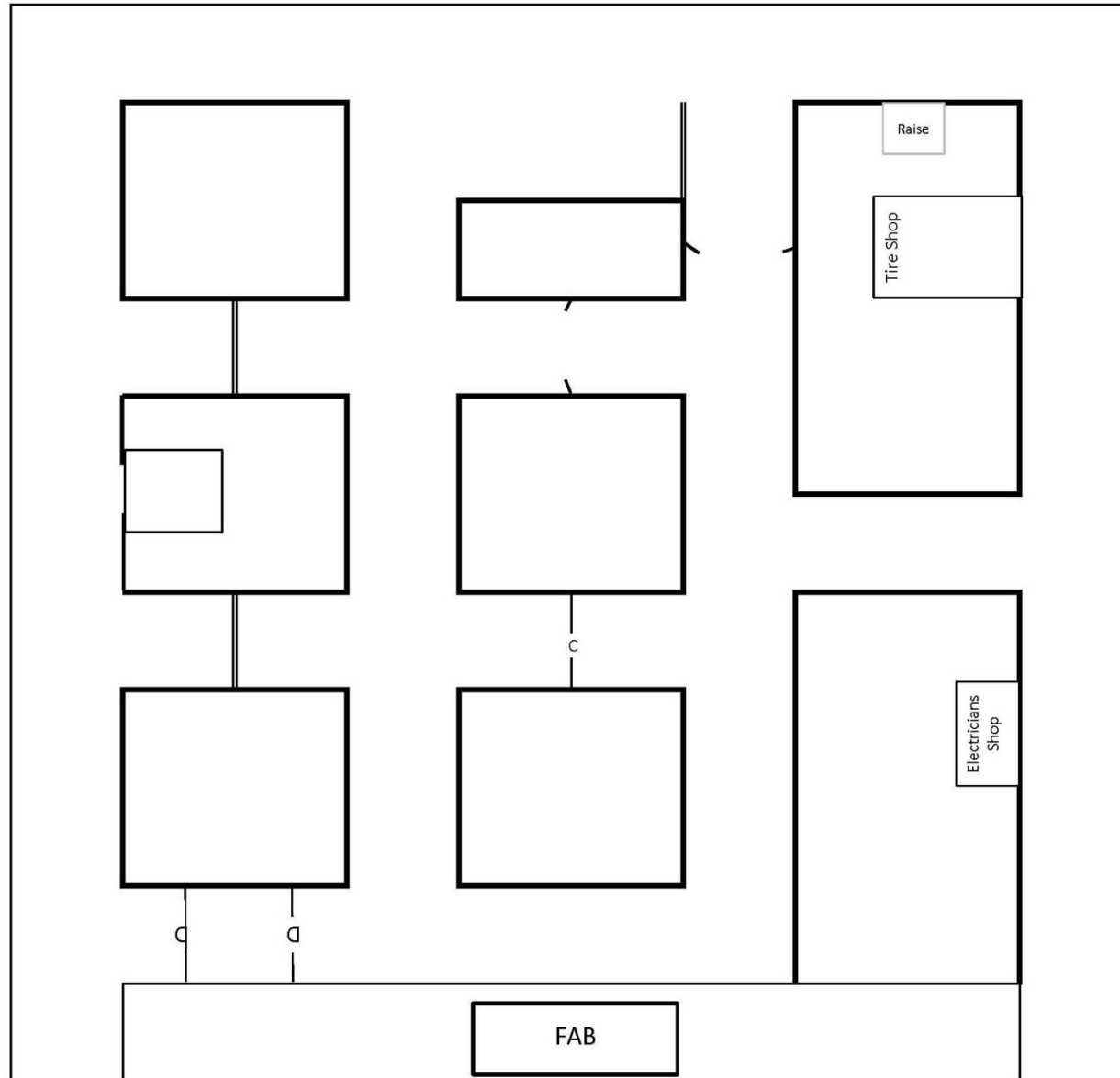
Additional Information – provided by Mine Manager after the team has started the clock

We've figured out why we have NO₂ coming out of the #2 shaft.

According to the mechanic's supervisor, his crew was repairing one of our prill pots. If the crew did hot work on it... well, you get the idea.

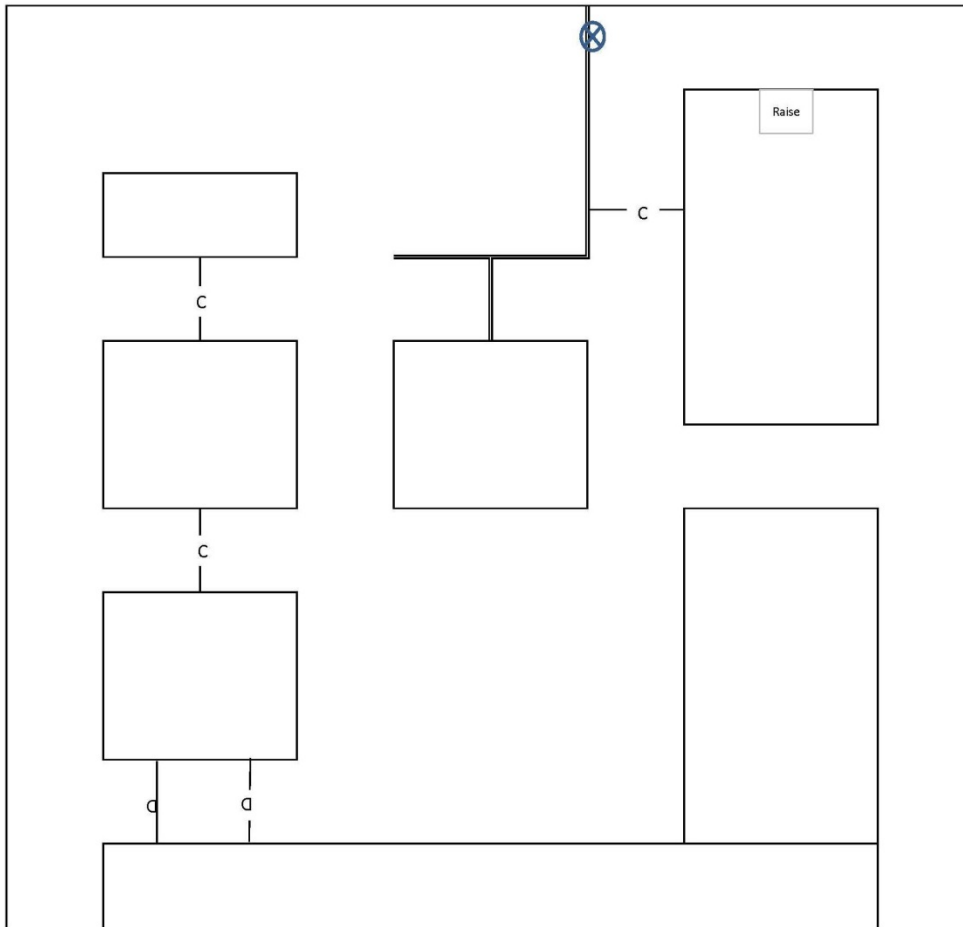
Oh, and while you're still here we found a long section map of the mine & have traced out the way air flows through the mine. There's an old abandoned raise that runs from the 1035 to the level above.





This is how the field looks from the bleachers this year.

This is much different than what the teams will see (on the next page).

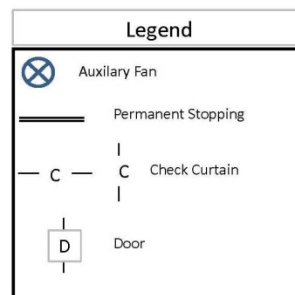


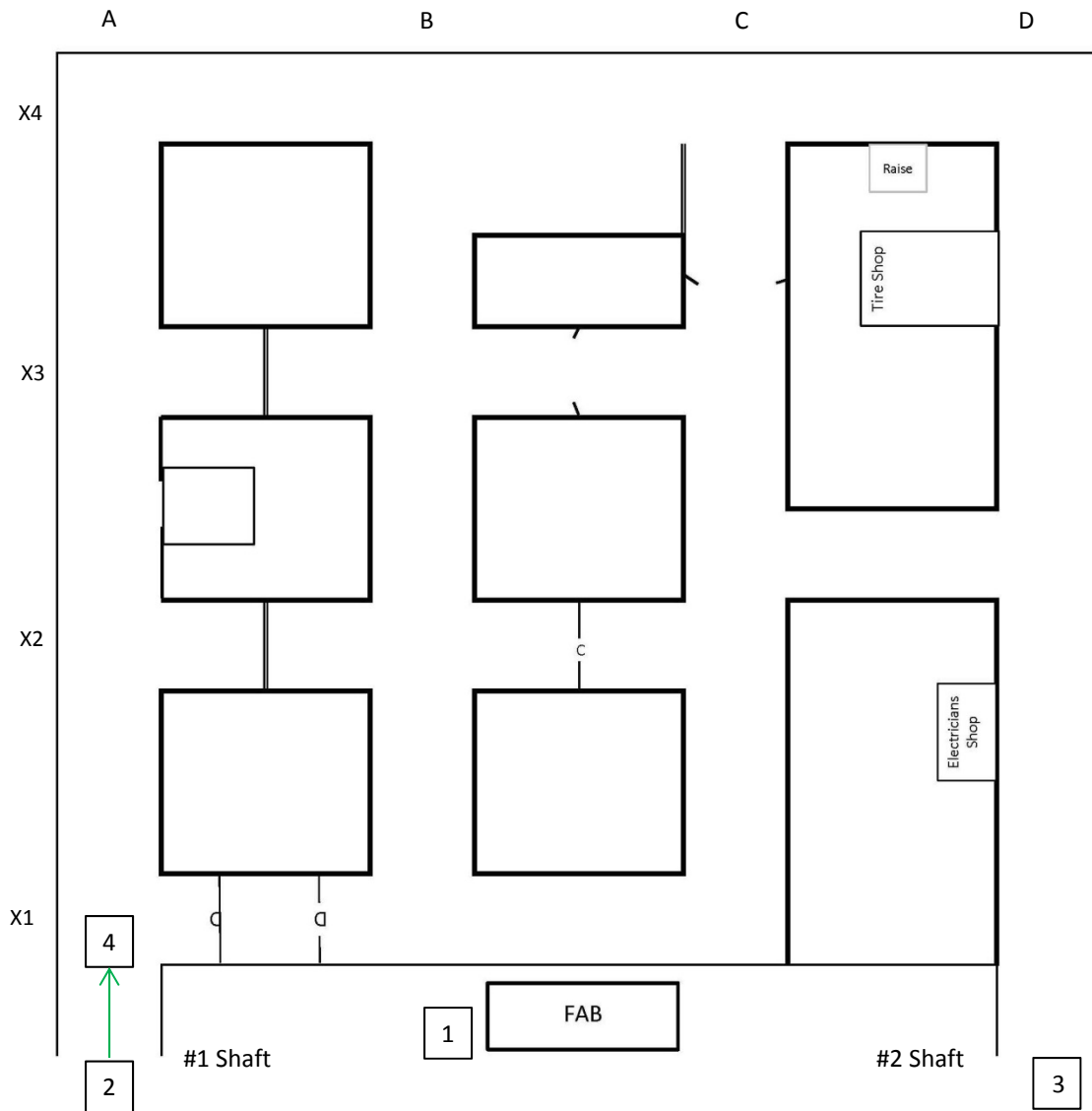
This is the mine map that the teams will be presented with. As you can tell there are big differences. We place these differences onto the maps to get the teams to map their exploration and what they find.

While working the problem the teams will find.

- Survivors
- Roof falls
- An uncontrollable fire
- Water
- Severely damaged ventilation controls
- Big errors in the map they've been provided.

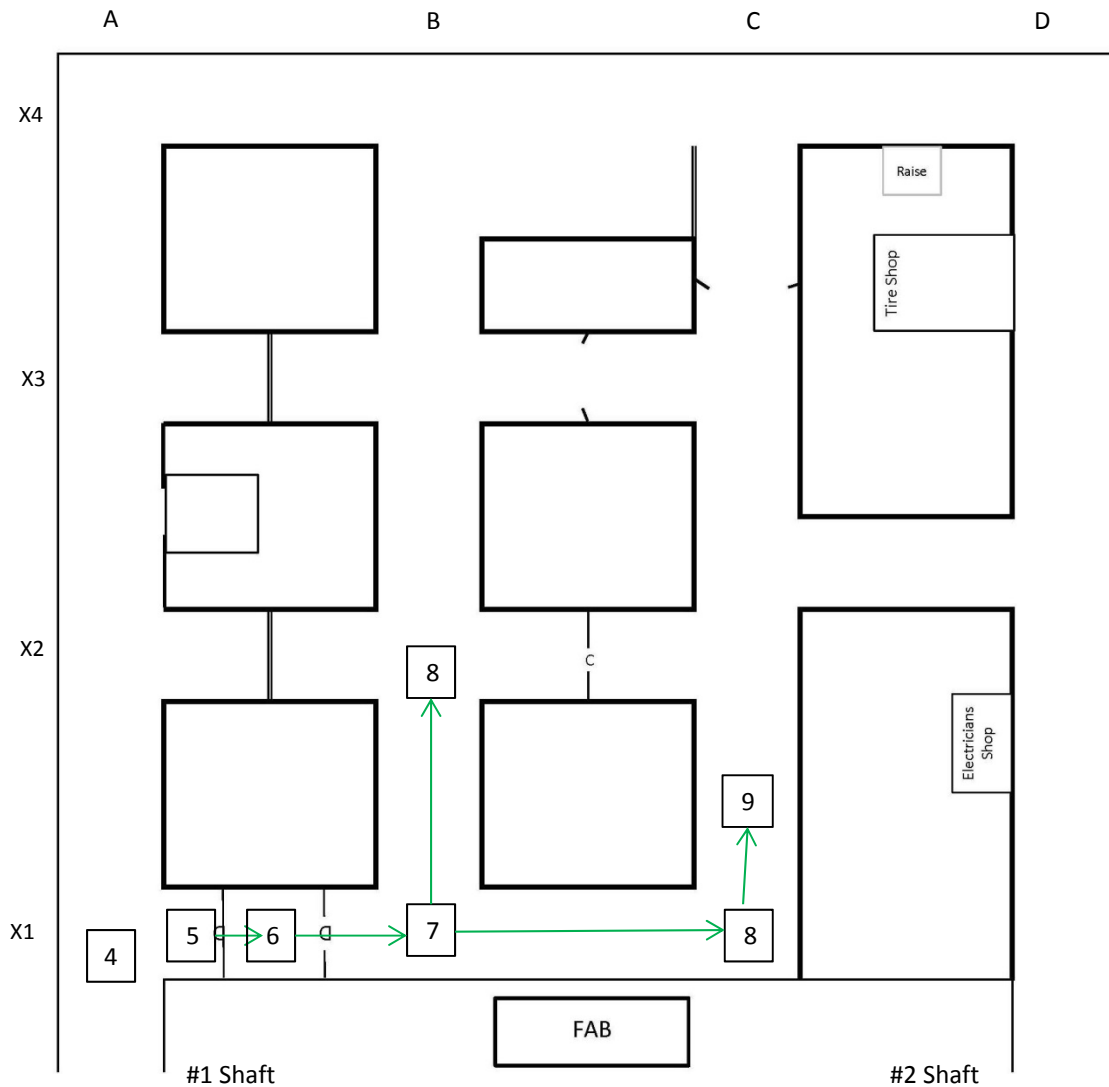
1035 Maintenance Level
 Drafted 10/1/2014
 Billy Bob's Drafting Co., Inc. (7



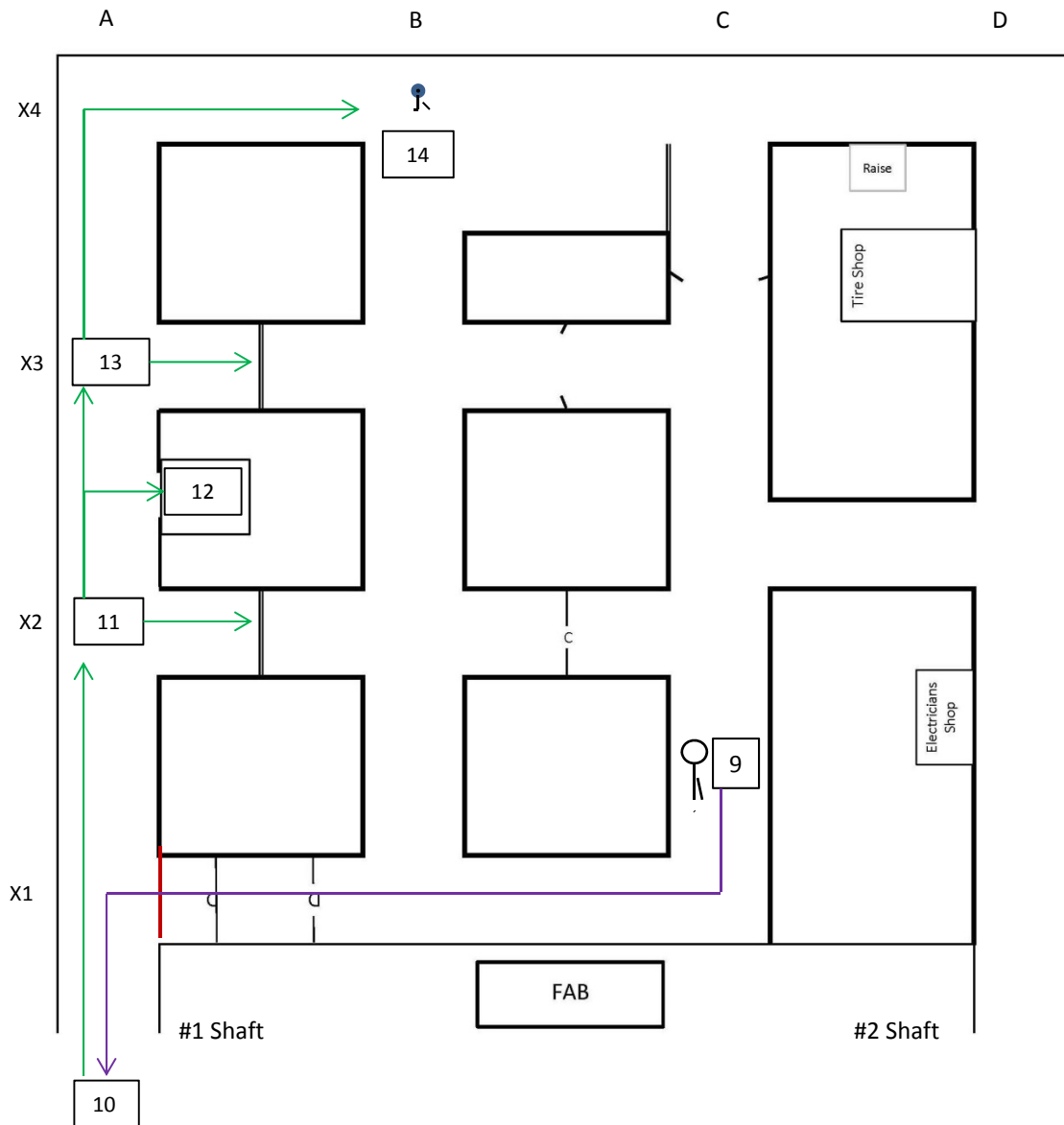


Working this year's problem

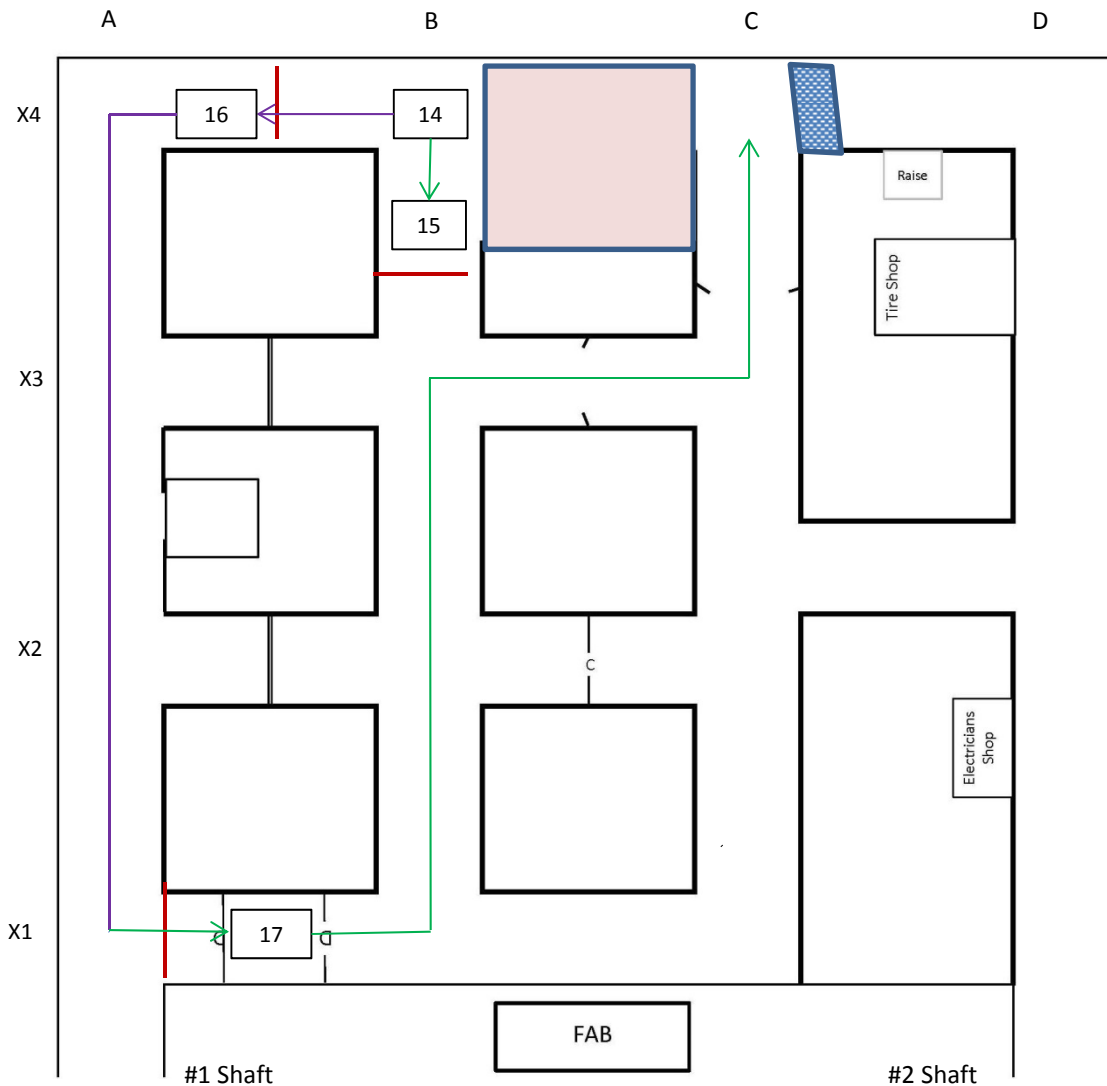
- The team will arrive on the field and meet the Judges and Mine Manager.
- Once the Captain starts the clock any additional information will be provided to the team.
- The gas person will test his/her meters at the gasbox (the location of the gasbox has been moved to the FAB in the 2016) before beginning the problem.
- Typically the team captain and gas person will go to each shaft to perform gas tests and check the operation of the cage. Since there are dangerous gas levels and smoke coming out of the #2 shaft, both must be under oxygen.
- Once the checks are made, the Captain will advance the team and enter the mine via the cage at the #1 shaft. Each team member must count off as they enter the mine.
- Teams typically do a 50 foot team check as they come off the cage. They must perform the check before they reach mid-pillar between X2 & X3.



- The Captain and gas person will make gas tests in the intersection of X1 & A.
- In X1, the team will encounter a closed air door. Most teams will opt to go through the airdoor. If they do this, the team must airlock from corner to corner across the entry. If they did not pick up the stopping material (next to the FAB) before entering the mine, the team will have to travel back up the shaft to retrieve it.
- Once the airlock is built, the team will open the door and travel through it. The team doesn't have to build another airlock since the first is still in place. They can open the second door and travel into the intersection of X1 & B.
- Gas tests will be made in the intersection. The team will encounter smoke, low oxygen, high carbon monoxide and elevated nitrogen dioxide levels. Here each team member must count off "going into smoke".
- The team has options at this point. They can either travel further up B, or continue down X1.
- If the team travels up B, they will encounter ankle deep water in the intersection of B & X2. In order to avoid a 2+3 rule violation, the team cannot travel any further than 3 feet up past the corner of X2 & B.
- If the team continues down X1, they will find an unconscious miner as they turn up into C.



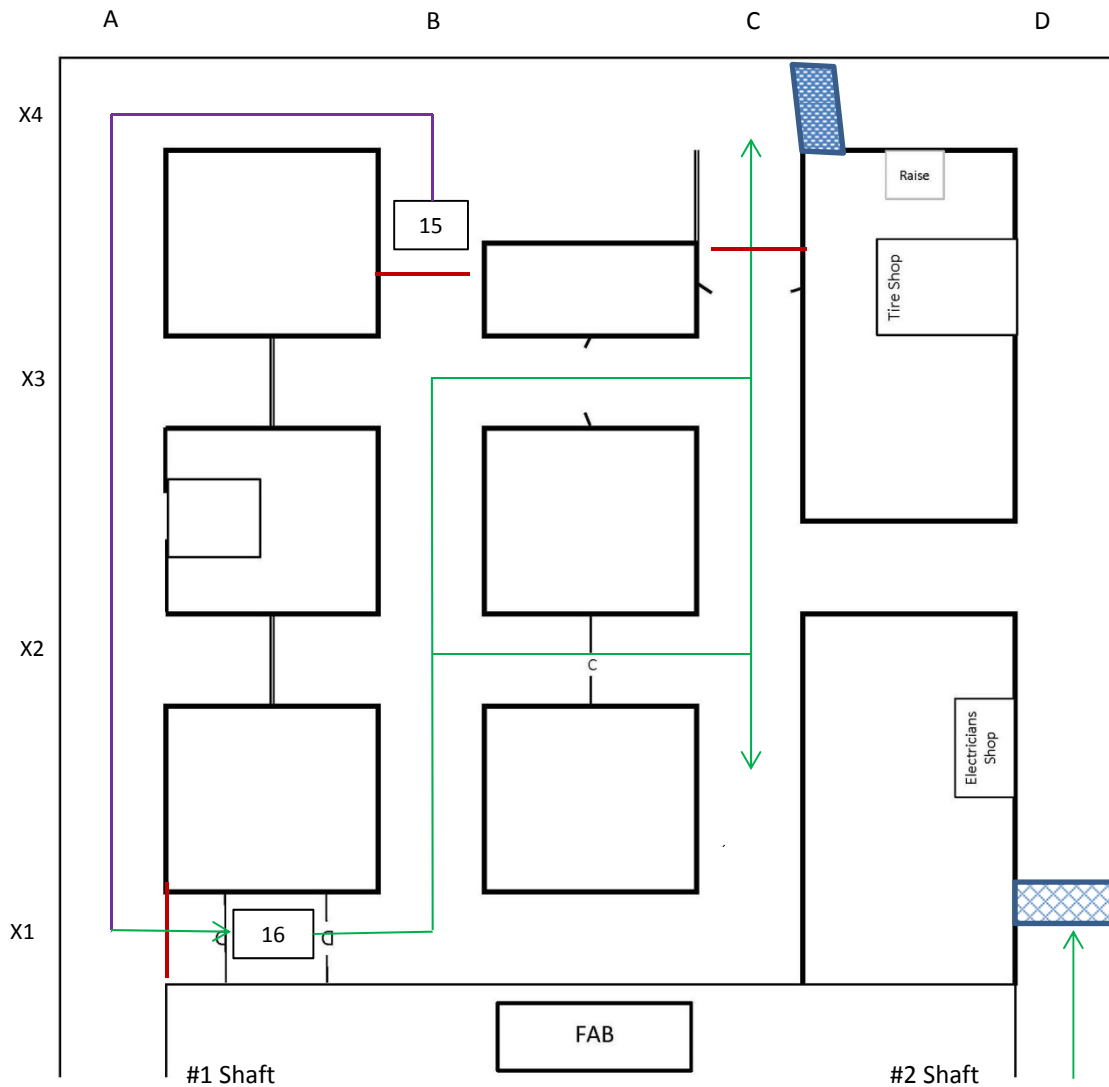
- The miner they encounter will be in an irrespirable atmosphere and the team will have to protect this victim from further exposure. The team must put Sam "Wiz" Bang under oxygen in accordance with established rules. They will not find any other injuries, but since he is unconscious they must package him and bring him out of the mine. There is a new rule change concerning the application of an apparatus. The team must apply the facepiece. Once the person is correctly under "air" the hoses are disconnected from the facepiece.
- Once the victim is properly turned over to the FAB the team can reenter the mine. Since they have explored as far as they can in X1, the team will travel up A. The team will stop and tie-in at A & X2 and take gas tests.
- In the middle of the pillar at X2 & X3 the team will encounter the tool room. The door to the tool room will be open. Inside they will find various object of interest. The team will perform gas tests and will check to see if the mine phone in the room is working (it's not).
- The team will perform gas tests at X3 and check the stopping. Since there are no open crosscuts in A beyond X1, the team can travel into X4.
- As they enter into the intersection of X4 & B the team will encounter a body. Once the primary survey is completed the #2 judge will provide the Captain indicating there are no signs of life.



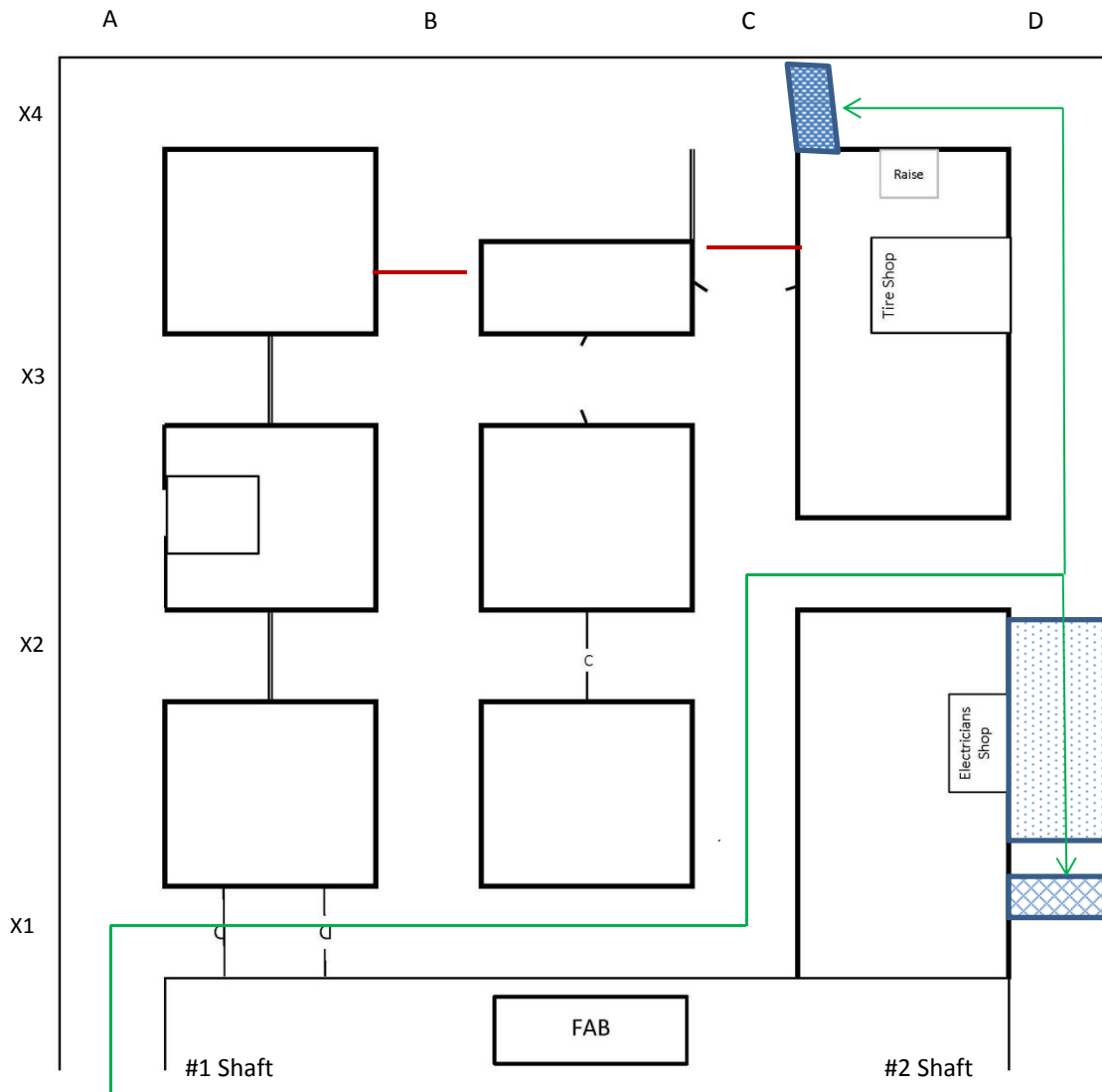
- Once the requirements are met in the intersection of X4 & B, the captain will typically stretch out. As he approaches the shop located between X4, B & C he will discover a fire radiating intense heat. The team will try to put it out, but will not be able to. Since they are unable to put the fire out, the team will need to seal the fire. Since they have not explored the rest of the mine and will not know the effect it will have on ventilation they will need to make sure to leave a regulator at each seal.
- At this point they have found four sets of stopping materials. To avoid a penalty for undue delay the team will seal in at least one area before retreating to find the back side of the fire. The team will not be able to build a stopping close to the center of the A/B X3 & X4 stopping due to a piece of equipment in the way. (In reality, according to the rules they have effectively sealed the fire, but they do not know that yet). **The stopping in X4 is one option for sealing the fire. If they build there, they will not need to build in C.**

Note: the teams will enter into smoke, low oxygen and elevated carbon monoxide at mid-pillar in X4 and will need to call out as “going into smoke”.

- The green arrow that snakes through the field in the general route the teams can take to find the back-side of the fire. At the inby corner of the pillar at X4, C & D there is an area that has caved tight across the drift. The route shown will allow the team to tie-in in B.

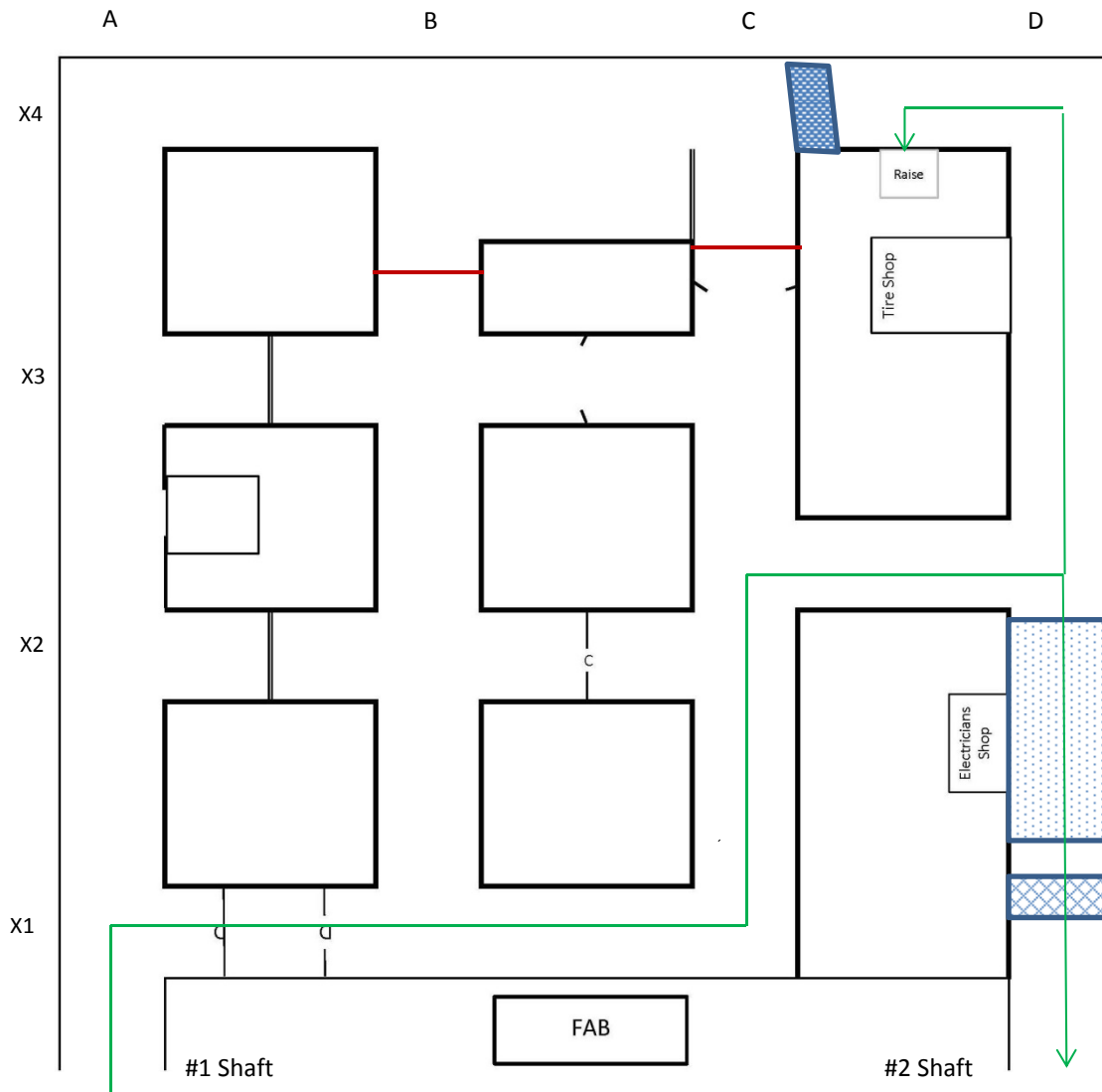


- This is the other option for sealing the fire. Instead of sealing in X4, the team retreats back down A, through the airdoors at X1 and back up B. If they come up B, the team can tie back in behind the seal, go across to C and up toward X4. They will need to explore the X4 C intersection. There they will find loose roof and incompetent ribs. The team will have to stand timber as they enter into the area. Once complete, they will find a “caved tight area to their right and the other side of the fire to their left. To seal here, the team will have to retreat back out and build across C. They will not be able to use the damaged ventilation controls (blown out curtain).
- Depending on the path of travel, the team will need to tie-in the rest of C.
- If the team has not traveled the #2 shaft yet it would be a good idea to do so now.
- The team will ring the cage up, enter (must count off going into smoke) and ring the cage down. Once they leave the cage the team will advance up D approximately 10 feet and run into an area that is “caved impassable”. Since they are unable to travel any further the team will have to retreat and return underground via shaft #1.



With the fire handled and two miners found the team can continue exploration. If everything behind them has been tied in the team can proceed from #1 shaft, through the airdoors in X1 to C.

- In C, X2.5 they will find a ribbed boss buggy.
- If the team travels down D toward the shaft they will run into an area of loose back. To traverse this area to tie-in behind the caved impassible, they will need to timber their way in. Once they get to the barricade erected at the Electrician's shop they can bang on the door. The person inside will respond with a scripted message. The gas concentrations will not allow the team to airlock in.
- If the team travels left, they will come to the Tire Shop barricade. Here again, one person inside will respond with a scripted message. Again, the gas concentrations will not allow the team to airlock in to get to the people inside.
- The team will need to continue toward X4 to tie-in behind the Caved Tight area. On their way they will come across a raise with a stopping. The stopping has a built-in regulator in it that is closed. Once the team is tied in they will need to determine how they are going to ventilate the mine.



Most teams will decide to close the seals, open both airdoors and then open the regulator in the stopping at the raise. The fan can then be started. The open regulator allows the air to split & clear in front of the Tire Shop. The rest goes out through the #2 shaft, clearing the air in front of the Electrician's Shop.

- Once the fan is started, the gas placards will turn over showing "clear air" across the path of ventilation.
- The team will have to retest for gasses along the path they intend to take when reentering the area and/or removing the remaining miners.
- The team may remove the miners from either of the barricaded areas in any order.
- If there are injuries, the team will need to treat them before leaving the shops.
- The shops will need to be explored.
- Once the entire mine has been explored, the fire controlled and miners removed from the mine the Captain may stop the clock.

The bench and first-aid competition will start at 7:00 am tomorrow morning. We'll see you then!