I am ____________, superintendent of the Abundancia Mine. You are located at the fresh air base on the 1st East Section. A three-person crew entered the mine to conduct some hands-on training during an idle shift. When the miners failed to contact the surface at the prearranged time, personnel were dispatched to the section. Attempts to enter the section have been unsuccessful.

Rescue teams have explored the East Submain Intake entries and the connector from these entries with the 1st East Section. A temporary stopping was erected in the connector. Teams also tried entering the section through the right side connecting entry, but were stopped by an airtight cave. The conditions they encountered and the stopping that they erected are shown on a map of the entire area, which will be provided to you.

The mine is ventilated by one main exhausting fan, which must remain on and cannot be reversed. Backup rescue teams are available and you may request assistance from them through me. Outby mine maps of the entire area will be provided should you need to make any ventilation changes during the working of the problem. Ventilation changes that you request backup rescue teams to make will take two minutes to complete. Changes that you request the backup teams to do shall be noted on the map of the entire area and initialed by a team member. No additional work, other than apparatus checks and reviewing the maps, will be permitted during this two-minute period.

All electrical circuits are energized to the fresh air base. The coal seam is walking height and the roof is supported by roof bolts. Water and explosive gases have been encountered at this mine. We have a competent lifeline person to give and return signals. Mining equipment, other than mine phones and portable pumps, cannot be moved. The mine maps were updated prior to the last production shift. Written instructions and mine maps will be provided when you are ready to work.

Due to adverse mine conditions, a total of 90 minutes will be allotted to your team to complete the problem.

GOOD LUCK TEAMS!
Farmington, NM
Ice Breaker
Mine Rescue Contest
April 29, 2009

ABUNDANCIA MINE PROBLEM

Account for all missing persons

Explore all areas of the mine that can be safely examined

TIME LIMIT OF 90 MINUTES

Good Luck!
FARMINGTON, NM MINE RESCUE CONTEST - 2009
1st EAST SECTION
STEP 1 VENTILATION

★ = Ignition Source

Remove Gas
Open
Set Timbers

O₂ 14%
CH₄ 3%

Over Waist Deep

Continuous Mining Machine

Battery Scoop

Battery Mine Phone

Discharge Waterline

Pump Switch

Knee Deep

Tallpiece Pump Cable

End Ankle Deep

Power Center

High Voltage Cable

Check Board

Breathing Officer

High Voltage Power Cable to Surface

Open or Close

12 Timbers

50 Feet of Discharge Waterline & Tools

5 Hp Portable Water Pump

End Knee Deep

Knee Deep

Open

Temporary Stopping Installed By Previous Mine Rescue Team
Note: Backup team must build stoppings in East Submain Intakes to direct air to Connector
MAP OF ENTIRE AREA
1" = 15'

STEP 2 VENTILATION

Note: Backup team must build stoppages in East Submain Intakes to direct air to Connector in Step 2 Vent.

Temporary Stopping Installed By Previous Rescue Team

Battery Scoop

Caved Airtight

Fresh Air Base