



# TECHNOLOGY NEWS

No. 482

*Milestones in Mining Safety and Health Technology*

June 2000

## Ground Support Safety Training Video

### Objective

To develop and evaluate the effectiveness of safety training tools specific to underground metal/nonmetal mining.

### Background

In a series of stakeholder meetings held in the western United States beginning in 1998, participants identified a critical lack of appropriate training materials applicable to metal/nonmetal mining. Participants in the meetings provided many insights into what types of training materials are most effective in dealing with both experienced and inexperienced miners. Most important was that the materials should be realistic and interesting and that some way should be found to capture the wisdom and expertise of older miners before they retired.

In response, training videos that focus on safe practices during the mining cycle are being produced. Two videos—one on handling explosives underground and one on identifying roof hazards and proper scaling techniques—were completed during 1999, and a third video is now available. This video, entitled “Ground Support...It’s Important, or Miner Mike Saves the Day,” presents information on why ground supports work and how to install them properly.

### Approach

The new video, “Ground Support...It’s Important,” presents a scenario in which two young miners make a bad decision—to leave some supports out in order to catch up in their mining cycle. An expert miner, “Miner Mike,” sees this potentially disastrous situation and educates the young miners about what could happen if they continued to leave supports out. He introduces the young miners to several expert miners, who explain how to install different types of supports correctly, as well as share what experience has taught them over the years.

### How It Works

All footage was taken in operating, underground mines, using 14 experts to provide the teaching. Because of the wide variety of supports used underground, it was necessary to focus on those types more common to hard-rock mining. While more complex support systems, such as shotcrete and cable bolts, are mentioned, detailed material is not included.

In the course of educating young miners Jeff and Jason, Miner Mike provides information on—

- Why supports are necessary in underground mines.
- The main types of supports commonly used in underground hard-rock mines.
- How supports work.
- How holes for bolts are drilled correctly using jacklegs, drill jumbos, and bolting jumbos.
- How wire mesh, wire panels, metal mats, and different types of bolts, including mechanical bolts, friction bolts, grouted bolts, and cable bolts, are installed properly.
- How to recognize that supports have failed and what to do about it.



Filming interview with two expert miners and “Miner Mike.”



**U.S. Department of Health and Human Services**

Public Health Service

Centers for Disease Control and Prevention

National Institute for Occupational Safety and Health



This video is approximately 33 minutes long and is appropriate for both experienced and new miners.

## For More Information

Additional information can be obtained by contacting Elaine Cullen (509) 354-8057, e-mail [efc8@cdc.gov](mailto:efc8@cdc.gov). Spokane Research Lab, E. 315 Montgomery, Spokane, WA 99207.

To receive additional information about occupational safety and health problems, call **1-800-35-NIOSH (1-800-356-4674)**, or visit the NIOSH Web site at [www.cdc.gov/niosh](http://www.cdc.gov/niosh)

Mention of any company name or product does not constitute endorsement by the National Institute for Occupational Safety and Health.