Instructor's Guide
ROOF FALL ENTRAPMENT VIDEOTAPE
Larry Strayer's Account

This instructor's guide is designed to accompany a videotape of an interview with a miner who tells about a fall that occurred while he and another miner were attempting to bar down top just inby the last row of supports. He explains that the other miner was injured but eventually recovered. He, however, lost a leg as a result of this accident. It is stressed that going even a short distance inby supports is not worth the possible outcome of an accident. The video would be beneficial for use with anyone who works underground. It would be particularly useful for training new miners. This guide contains suggestions to help you use the tape as part of an effective training session.

Other Tapes in This Series

There are three videotapes in this series. Each is approximately 12 minutes long and deals with the experience of one miner just before, during, and after a serious roof fall. The individuals on the tapes are not professional actors, but are miners or former miners. The videotapes all follow the same format. First the miner tells about the event and then an interviewer asks some specific questions so that important points will be covered. While all three of the tapes illustrate the dangers of unsupported top, each presents the information with a different focus. Descriptions of the other two tapes follow:

Dave Garry's Account

> Dave, a miner helper, tells about witnessing a roof fall that covered the continuous mining machine. He discusses efforts that were made inby supports to rescue the trapped, but unharmed operator and recognizes that danger could have been minimized by installing temporary supports before continuing rescue.

Dave Murone's Account

> During this interview, Dave tells about the experience of having to recover the body of a friend who was killed by a roof fall. The individual who was killed was inby supports at the time of the accident. Dave speculates on why his friend was under unsupported top and discusses the effect that witnessing this accident had on him.

Preparing for Class

Read through the rest of this guide and view the videotape to become familiar with the presentation. Review the **Discussion Ideas** section of this guide for help with preparing to lead the class discussion. For more information you may want to look at the items listed below as **Other Resources**.

The only materials necessary for this training session are a VHS player and a monitor that can be clearly seen and heard by all members in the class. If desired, the pages showing a diagram of the accident scene and the list of discussion questions could be copied to hand out to each trainee or put onto transparencies and shown on an overhead projector.

The videotape can be shown with little or no introduction. However, if the class is not familiar with retreat mining, it may be helpful to explain that on a retreat section coal pillars (stumps) are completely extracted. In the video when Larry refers to belting off, he is talking about the process of removing belt sections and moving the tailpiece outby. Showing the diagram on an overhead may also help class members to understand what was happening at the time of the fall.

The discussion following the videotape is the most important part of the training exercise. One method for leading this activity is to divide your class into small groups and ask them to decide on joint answers to the discussion questions provided in this guide. Give them a limited amount of time to arrive at answers and then ask each group to report their answers to the class. Be sure to leave enough time for the entire class to discuss the responses.

Other Resources

1. Short articles on this subject by Robert Peters and Arnold Love appear in the first four issues of the 1992 *Holmes Safety Bulletin*.
2. Bureau of Mines IC Reports 9283 and 9300. Contact Robert Peters at (412) 892-6895.

If you have questions or comments concerning this Instructor's Guide contact Launa Mallett, Bureau of Mines (412) 892-6658.

Discussion Ideas for the Instructor

After viewing the videotape, trainees should be given an opportunity to ask questions and express their ideas and opinions about the material that was presented. They should be encouraged to relate the discussion to their work setting. Questions that may be used to guide the class discussion and information related to each are provided below.

1. **If a miner is only a step or two inby supports, can he or she run or jump to safety if the top falls?**

Miners may think, mistakenly, that the area just inby bolts is safe. Bureau of Mines researchers recently asked 250 miners if they had observed any of their co-workers inby supported top within the past six months. A little over half answered "yes". Those who said yes were asked how far inby the person went and how long they stayed. Most miners (52%) said that their co-worker had gone less than 5 feet inby the last row of supports, and many (55%) said that the individual stayed under unsupported top for only a few seconds. While this may seem safer than going a greater distance inby supports, Larry says that he was within a few feet of the last row of bolts and yet there was no time to escape. He glimpsed something out of the corner of his eye and attempted to jump away from the fall, but it was impossible to escape.

2. **After the fall, Larry directed rescuers to his friend, Barry, who he thought might be in more danger. Did the rescuers do the right thing by leaving Larry to help his buddy?**

The answer to this question would depend on a number of factors about the situation. If there were enough people available, someone should have stayed with Larry even though he said that he was OK. Victims sometimes do not realize the full extent of their injuries and miners with severe injuries can go into shock quickly.

3. **Should rescuers take the time to support the roof in the area before proceeding to rescue trapped victims? Why or why not?**

Miners should always be trained to set supports before attempting to rescue anyone. This protects the rescuers and the trapped miner. Miners in your class may bring up the point that given the position of the victims with respect to pieces of fallen rock and mining equipment, it may not be physically possible to find places to set adequate roof supports before rescuing the victims. While this may be true and miners sometimes take such risks during rescue efforts, they should never be encouraged to do so. In the tape, Larry explains that posts were used as levers to lift the rock that had crushed his leg. This suggests that (a) temporary supports were available near the scene of the accident, and (b) the miners should have considered using them to support the top before extracting the victims from beneath the fallen material. (We do not know if space would have permitted them to have actually done so.)

4. **Some people may say to themselves, "If I go out under unsupported top that is my business because its my life that is being risked." Is this true?**

Larry talks about the fact that his actions caused his co-workers to be put in a dangerous situation--they were under dangerous roof conditions while attempting to rescue him and his buddy. He also explains some of the effects that his action had on his family.

5. **Can you think of one or two situations which might cause you or your co-workers to go under unsupported top? Can equipment or work procedures be changed to prevent that situation from coming up in the future?**

Recent Bureau of Mines research has shown that miners often know of tasks that make going under unsupported top more likely. Furthermore, they sometimes think of ways to eliminate that hazard. See the Holmes articles listed in **Other Resources** for more information.

6. **Does your mine have a plan concerning what miners are to do in the event that a roof fall causes people or equipment to be trapped? If yes, what are you supposed to do according to that plan?**

This question can be used to determine if each miner understands company procedures for actions to be taken when a roof fall occurs. Discuss who should be notified and what actions, if any, should be taken by the miners at the scene of the fall.

DISCUSSION QUESTIONS for LARRY STRAYER'S ACCOUNT

1. **If a miner is only a step or two inby supports, can he or she run or jump to safety if the top falls?**

2. **After the fall, Larry directed rescuers to his friend, Barry, who he thought might be in more danger. Did the rescuers do the right thing by leaving Larry to help his buddy?**

3. **Should rescuers take the time to support the roof in the area before proceeding to rescue trapped victims? Why or why not?**

   Are temporary supports always available in the sections where you work?

4. **Some people may say to themselves, "If I go out under unsupported top that is my business because its my life that is being risked." Is this true?**

5. **Can you think of one or two situations which might cause you or your co-workers to go under unsupported top?**

   Can equipment or work procedures be changed to prevent that situation from coming up in the future?

6. **Does your mine have a plan concerning what miners are to do in the event that a roof fall causes people or equipment to be trapped?**

   If yes, what are you supposed to do according to that plan?

GROUNDFALL ACCIDENT STATISTICS 1986-1990

Fatalities	95*
Injuries	4,299
Non-injury accidents	11,288
Total	**15,682**

**Half of these fatalities occurred under unsupported roof. Groundfalls are the leading cause of fatalities in U.S. underground coal mines.*