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# BULLETIN

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November 1992



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**Please note:** The views and conclusions expressed in HSA Bulletin articles are those of the authors and should not be interpreted as representing official policy of the Mine Safety and Health Administration.

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## KEEP US IN CIRCULATION

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The Holmes Safety Association Bulletin contains safety articles on a variety of subjects: fatal accident abstracts, studies, posters and other safety-related topics. This information is provided free of charge and is designed to assist in presentations to groups of mine and plant workers during on-the-job safety meetings.

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# Welcome new members

NAME	CHAPTER NUMBER	LOCATION	NAME	CHAPTER NUMBER	LOCATION
North Branch Coal Co., Inc.	9924	Richlands, VA	Abx, Inc.	9949	Williamson, WV
Pittsfield Sand and Gravel, Inc.	9925	North Adams, MA	Harold Lyons & Sons, Inc.	9950	Cold Spring, NY
C & N Rocks & Gifts	9926	Ashdown, AR	Duffy Layton Contracting	9951	Stanfordville, NY
Red Oak Mine	9927	Wister, OK	Stormville Dolomite	9952	Stormville, NY
Fort Smith	9928	Van Buren, AR	Black Streak Mining, Inc.	9953	Cawood, KY
T & D Construction	9929	Newell, SD	Rolling River	9954	De Queen, AR
Noco	9930	Ft. Covington, NY	Dielco Crane Service, Inc.	9955	Las Vegas, NV
Oakvale Construction Co.	9931	Lake Placid, NY	Standard Gravel	9956	Camden, AR
R. Deso, Inc.	9932	Champlain, NY	Mid-America Mining & Develop.	9957	Ft. Smith, AR
Syracuse Supply Company	9933	Plattsburgh, NY	Herzog Hatton	9958	Hatfield, AR
Dakota Stone	9934	Hill City, SD	Silver Nugget, Inc.	9959	Duffield, VA
Triple O Mining	9935	Amerstdale, WV	Minntac Mine	9960	Mt. Iron, MN
Mountain Minerals, Inc.	9936	Summersville, WV	Minntac Plant	9961	Mt. Iron, MN
Cherry Mountain Quarry	9937	Fredricksburg, TX	Minntac Maintenance	9962	Mt. Iron, MN
Tri Lakes	9938	Hot Springs, AR	Crusher #1	9963	Balfour, ND
Arkansas Tuber Association	9939	Pine Bluff, AR	Portable Crusher	9964	Jamestown, ND
Granite Cutters Association	9940	Barre, VT	M & Mb Coal Company	9965	Stambaugh, KY
Hart - Judson Pit	9941	Wingdale, NY	Interstate Sand & Gravel	9966	Walley City, ND
Fishkill Pit & Plant	9942	Montrose, NY	Portable Screener	9967	Jamestown, ND
Town of Stanford Highway Dept.	9943	Stanfordville, NY	Dirtco, Inc.	9968	Crossett, AR
Buckley Powder Co.	9944	Englewood, CO	Simpson Mining Company, Inc.	9969	Middlesboro, KY
Kiser Brothers Coal Company	9945	Pikeville, KY	Nor-co	9970	Plattsburgh, NY
Peckham - Patterson	9946	Wingdale, NY	Beekmantown Boys	9971	West Chazy, NY
Kaycee Mine	9947	Kaycee, WY	Metalcraft Mining Equipment	9972	Fenwick, WV
Tongue River Stone, Inc.	9948	Sheridan, WY	Washed Aggregate Resources, Inc.	9973	Wassaic, NY

# Holmes Safety Association Monthly Safety Topic



## Fatal sliding material accident

**GENERAL INFORMATION:** A 44-year-old independent owner/operator truck driver was fatally injured at a surface sand and gravel operation when he was engulfed by sliding material. He died 19 days after being rescued. The mine was a small surface operation. Material was mined from several benches in the pit, then processed and sized at the plant. The material was then conveyed to sand and gravel stockpiles.

**DESCRIPTION OF ACCIDENT:** The accident occurred at a sand fill stockpile a few hundred feet away from the plant. This sand fill had been mined and stockpiled about seven years ago. The operator had begun loading from this pile about a month before the accident occurred. The material was somewhat consolidated because it had remained undisturbed for a long period. Near vertical walls developed as sand was removed from the base of the stockpile.

The victim had been hauling material from the mine for about two months with a rig which consisted of a tractor, trailer, and pup trailer with a total capacity of about 18 yards. The weather the day of the accident was clear and calm, although it had rained the previous several days.

The victim made several trips without incident after starting work at about 8:00 a.m. About 12:50 p.m., the front-end loader operator positioned the victim's truck near the stockpile and loaded both trailers. The victim walked to the back of the pup trailer after loading was finished, perhaps to clear away some loose material. The front-end loader operator started to warn the victim away from the base of the stockpile, when suddenly, a portion of the stockpile collapsed and buried the victim. The front-end loader operator attempted to move the victim's truck forward but it became stuck in the sand. He then ran for help. It took approximately seven minutes to extricate the victim from the sand.

The victim was comatose and remained so until his death, 19 days later in the hospital from traumatic asphyxiation.

**CONCLUSION:** The accident was caused by failure to trim the stockpile in order to maintain a natural angle of repose.

A contributing factor to the accident was the victim placing himself in a hazardous position at the base of the stockpile.



### MEANS OF PREVENTION

1. Stockpile and muckpile faces shall be trimmed to prevent hazards to persons.
2. Housekeeping, or any similar functions, shall not be performed on any equipment at a stockpile or muckpile face which could expose the person to any hazardous condition.
3. Equipment operators should not dismount from their equipment except in a safe and secure area, or unless their safety is threatened.

# Taking safety personally leads to commitment

*by David T. Couillard  
Member, HSA Executive Committee*

My career in mine safety began in 1973, when I found myself teaching first aid and other basic safety subjects to miners throughout the Midwest. I was 23 years old, less than two years out of college, and, to put it mildly, not very knowledgeable about mining. But I found miners to be more receptive and appreciative than junior high school students, the captive recipients of my wisdom in a previous life as a substitute teacher. Because I was passing on potentially life-saving information, the miners usually paid pretty close attention to what I had to say.

In those days I had so much to learn about the technical aspects of mining and safety that I sometimes missed the human aspects. Laborers and equipment operators weren't just occupation titles, they were people. I often knew them only as names on course rosters or faces in an audience, faces that looked a lot older than mine.

As I did more field work and became more comfortable in performing my duties, I started getting to know miners in off-the-job settings. I ate with them and drank with them, and visited a few of them in their homes. I even met some miners who were close to my age. I discovered that these folks cared about a lot of the same things I cared about. They weren't just faces in the crowd anymore; a lot of them were my friends.

Then, toward the end of 1976, something happened at a quarry in Indiana that changed my life forever. A 27-year-old truck driver, a 20-year-old front-end loader operator, and two other workers were cleaning out a plugged impact crusher. The electrical power panel for the crusher was nearby, but the starting switch was located at the plant control console about 200 feet away. The plant operator, who had been working on another problem and was not aware of what the other four men were doing, started up the crusher. As the crusher started to move two of the workers were able to escape, but the truck driver and front-end loader operator were caught, went through the crusher, and received fatal injuries.

Now, I had read a lot of fatality reports before, but I really felt this one in my gut. This was not just another hard-luck story that had nothing to do with me. These victims were my age, people I probably would have enjoyed hanging out with. And they were dead because they hadn't followed the lock-out procedure prescribed by Federal law.

A few months after the accident, a colleague and I presented a series of safety seminars throughout Indiana. One of them was attended by coworkers of the two dead men. When the accident was mentioned, an angry worker made a surprising accusation:

that MESA (MSHA's predecessor agency) had caused the fatality. The worker went on to explain that the plant control console had been moved 200 feet away from the crusher because an inspector had found that the plant operator had been overexposed to noise. People had often entered the crusher to remove hang-ups without incident when the console and the crusher had been in the same place, because the plant operator had always been able to see what was going on. The victims had merely been following a past practice, completely unaware of the danger posed by the control console's new location.

In solving the noise exposure problem, management at the quarry had failed to consider the impact this solution would have on other activities, creating a tragic, though unintended, consequence. In a mine, people, machines, and materials are all parts of a dynamic, constantly changing environment. Pro-active accident prevention requires all of us in the mining community—management, labor, and MSHA—to recognize the relationship each part has to the whole process of mining. We must pay particularly close attention to the potential dangers of even subtle changes in the people, the machines, or the materials.

Bitter experience has taught us that the worst things we think can happen often do happen, as well as a lot of bad things we may have never even considered. For example, a machine with its electric power disconnect switch "locked out" in the "off" position might still be capable of injuring or killing

someone who is working in, on, and around it. In addition to electrical energy, workers can be zapped by hydraulic fluids under pressure, compressed air, energy stored in springs, potential energy from suspended parts, and any other sources that might cause unexpected mechanical movement. All such energy sources must be neutralized before any maintenance or setup work can be done safely. Once these sources are neutralized, the machine is in what is called "Zero Mechanical State" (ZMS), which affords maximum protection against unexpected mechanical movement.

The young men who were caught in the horror of the suddenly activated crusher 16 years ago had undoubtedly never heard of ZMS. There are plenty of young men and women working around crushers, conveyor belts, and other potentially dangerous machinery who even today know nothing about ZMS. But you and I do. We also know about Job Safety Analysis, "tool box" safety meetings, employee involvement techniques, and sources of technical information to solve specific problems (e.g., equipment manufacturers, MSHA Technical Support Centers, the National Mine Health and Safety Academy, etc.). What are we doing with that information?

Whenever I start getting complacent about finding ways to get life-saving information to miners, I think about all the things that have happened in my life during the past 16 years—things like fatherhood, career growth, vacations, and kids' ball games. I've had a rich stew-pot of experience the

past 16 years that a couple guys around my age missed out on because no one had explained to them the danger of failing to deenergize and lock out the power panel to a crusher. We're all going to be dead a lot longer than we'll be alive, but I'd like to stick around long enough to see my kids grow up and maybe find out what it feels like to be a grandpa. And I want to do all I can to provide miners with the informa-

tion they need to keep going home after every shift, enjoying their lives as much as I'm enjoying mine.

The image of young men going through a crusher haunts me every time I give a safety talk. It has transformed my job from a series of technical problems to be solved into a mission. I take your safety personally, and for me, that has made all the difference.

## Mining history group meets in Idaho

*By David F. Myrick*

The third annual meeting of The Mining History Association was held at Boise State University in Idaho June 4-7, 1992. Approximately 150 members and guests attended a series of lectures relating to mining history and the preservation of historic structures and landscapes as well as mining company archives.

An afternoon tour of the placer sites at Centerville and Idaho City was followed by an all-day excursion to the old mining town of Silver City and the nearby modern Delamar silver-gold mine of Nerco Exploration Company. Project Manager, Ben Porterfield, and associates welcomed the group to the Delamar mine.

Founded in 1989, the association has about 100 members consisting of mining professionals, archaeologists, and historians.

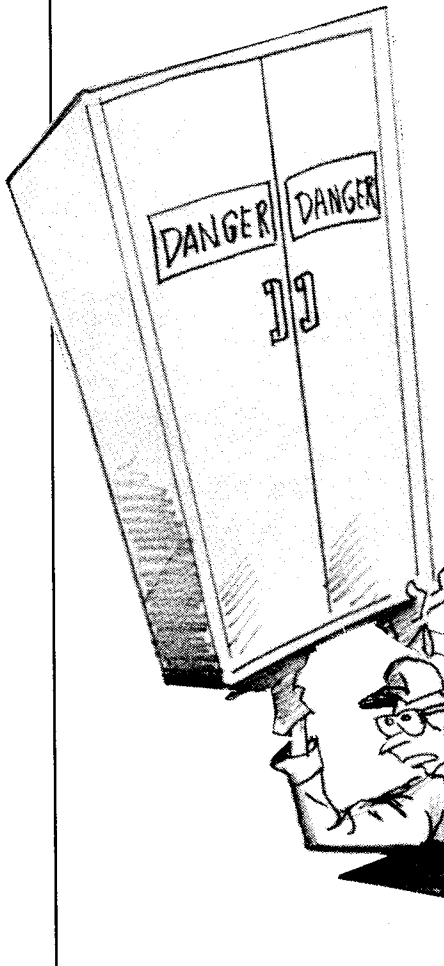
Membership is invited from those interested in the study of the mining past in its broadest terms. Annual dues are \$10 and include a newsletter.

Applications for membership should be sent to: The Mining History Association, P.O. Box 150300, Denver, Colorado 80215.

*This article is reprinted from Southwestern Pay Dirt, P.O. Drawer 48, Bisbee, Arizona 85603. The subscription rate for the magazine is \$28 a year. For further information, please contact Mr. John Haines at 602-432-2244.*



# ***STAY IN SHAPE***



## **KNOW YOUR LIMITATIONS**

## **USE GOOD LIFTING SENSE**

# Kentucky State Holmes Safety council meeting

The semiannual meeting of the Kentucky State Holmes Safety Council took place in Lexington, Kentucky, at the Holiday Inn-North, on August 27, 1992. Mr. Burl Scott, the Commissioner for the Kentucky Department of Mines and Minerals opened the meeting. Mr. Scott emphasized the importance of SAFETY, and suggested that safety awareness is up. With the Mine Safety and Health Administration (MSHA), the Kentucky Department of Mines and Minerals (KDMM), and industry all working together, we are getting results. He pointed out the importance of bringing attention to what a person is doing and discussing it with them. If a person is doing something right, we need to tell them. In the Holmes Safety Association,

people have to understand each other. People are more receptive to the SAFETY message now than ever before. Our goal for 1993 is NO FATALITIES. We are going to do everything possible for Kentucky to be fatality-free.

Mr. Greg Preston, of Wolf Creek Collieries, was the next speaker. Mr. Preston endorsed Commissioner Scott's thinking, by stressing the importance of spending more time encouraging people and recognizing people for their work.

The next scheduled meeting of the Kentucky State Holmes Safety Association takes place on February 19, 1993. The Holiday Inn-North in Lexington, Kentucky, will be the site of the next meeting.

## Safety record recognized

On August 18, Vernon Gomez, District Manager of MSHA's Metal and Nonmetal Western District, and two staff members presented employees of the Independence Mining

Company, Jerritt Canyon Mine, Elko, NV, with certificates in recognition for working 1,000,000 hours without a lost-time accident.

# **U.S. Bureau of Mines technology transfer seminars**

## **How to identify and respond to geologic hazards and prevent unsafe worker behavior**

**November 18, 1992**  
Charleston, West Virginia  
Ramada Inn  
8:30 a.m. to 4:00 p.m.

**December 8, 1992**  
Norton, Virginia  
Holiday Inn  
9:30 a.m. to 12:30 p.m.

**December 8, 1992**  
Big Stone Gap, Virginia  
Mountain Empire Community College  
1:30 p.m. to 4:30 p.m.

**December 9, 1992**  
Richlands, Virginia  
Southwest Virginia Community College  
9:30 a.m. to 12:30 p.m.

**December 10, 1992**  
Grundy, Virginia  
United Coal Company Training Center  
9:30 a.m. to 12:30 p.m.

**January 19, 1993**  
Hazard, Kentucky  
Hazard Community College  
8:30 a.m. to 3:00 p.m.

**January 21, 1993**  
Pikeville, Kentucky  
Landmark Inn  
8:30 a.m. to 3:00 p.m.

The topics to be discussed in these seminars will include:

- (1) techniques for keeping people away from unsupported roof,
- (2) increasing roof bolter operator awareness to the risks of falling roof material,
- (3) cutter roof failure,
- (4) ground control problems in multiple seam mining,
- (5) geologic structures which affect Appalachian coal mines, and
- (6) MSHA's Roof Evaluation and Accident Prevention (REAP) program.

There is no charge to attend these seminars. Attendees will each receive seminar proceedings containing all the papers prepared for these seminars. Not all papers will be presented at all locations. For an agenda listing the presentations to be given at each location contact Bob Peters, U.S. Bureau of Mines, P.O. Box 18070, Pittsburgh, Pennsylvania 15236 (Phone 412-892-6895).

## Hazard alert: aerosol car tire inflators

If you keep a can of aerosol car tire inflator in your trunk, you should be aware that Consumer and Corporate Affairs Canada has issued a warning that these inflators can cause explosions under certain circumstances. The propellant used to inject the sealant into the tire is a flammable butane, propane, and isobutane mixture. There are warnings on the label to alert users to the dangers during use. However, the person who subsequently repairs the tire may not be aware that the inflator/sealant has been used and that the air mixture in the tire may be flammable.

To eliminate the potential for an explosion:

- Handle all tires as if an inflator/sealant has been used.
- Completely deflate the tire, then inflate and deflate several more times before working on it.
- Never add air to a tire treated with inflator/sealant until it has been completely deflated, as the air/gas mixture can be more explosive.
- Be sure the repair area is well-ventilated.
- Do not use metal tools or any other source of sparks or heat near the tire until it has been deflated and vented as above.

*From: Mines Accident Prevention Association, Ontario, Safety News, Summer 1992 issue.*

## A guide to mine rescue competition

Mine rescue contests are designed to sharpen skills and test the knowledge of team members who would be called on to respond to a mine emergency. The contest requires team members to solve a hypothetical problem while being timed and observed by judges according to complex rules.

The team members gather outside a simulated mine, where the problem is described. Team members check all their equipment and then enter the mine to begin exploring it according to national rules that govern all mine rescue contests. Judges from MSHA and state Departments of Mines and Minerals

follow the teams and assess discount points for failure to observe the rules.

Each team has five working members, a briefing officer and alternates, who may be designated a "patient" by judges or asked to serve on the team if a replacement is needed.

The team is led by the captain and includes a map man, who draws a map of the mine as the team explores it; two gas men who check carbon monoxide, methane, and oxygen levels and carry a stretcher and extra gear; the communications man, who keeps in radio contact with the briefing officer outside the mine and is always attached to the

lifeline. The briefing officer draws a map of the mine as the communications man relays the information to him.

The team's objectives are to explore the mine in a way that does not endanger them or cause an explosion, to recover any trapped or injured miners, to account for any fatalities, and to put out any fires, and ventilate the mine so that work can resume.

Judges give discounts ranging from one to 30 points for a single infraction of the rules, meaning that a team can finish the contest with no discounts or an almost infinite number. The team with the fewest number of, or no, dis-

counts is the winner. In case of a tie the skill of the team in working the problem is the first tie-breaker. The second tie-breaker is the accuracy of the mine maps drawn by the team; third, the written examination scores; and fourth, the time used to solve the problem.

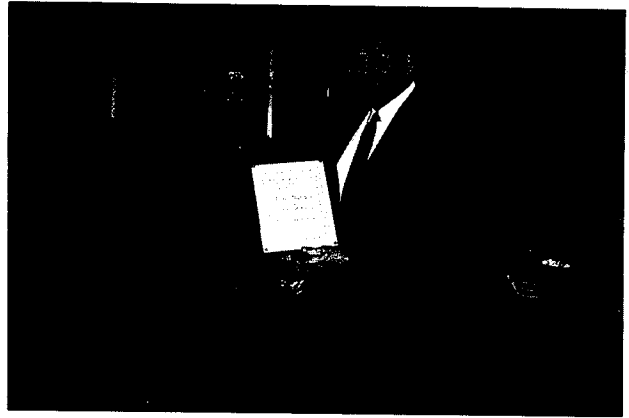
In the recent national competition, the top three teams all finished working the problem with no discounts, and they were all perfect on the other tie-breakers. The final winner was determined on length of time used to work the problem.

*Reprinted with permission of Peabody Holding Company, Inc., from February 1992 issue of Peabody "Pulse."*



# Recognition awards

Earnest Marcum, Safety Director, Arch of West Virginia, received a Special Recognition Award for his work with the West Virginia State Council and the Aracoma District Council. The Chairman of the Federal Mine Review Commission, Ford B. Ford, presented the Special Recognition award to Mr. Marcum on May 28, 1992, at Split Rock, Pennsylvania.



Judy Tate of McAlester, Oklahoma, received a Special Recognition Award from the Holmes Safety Association at Split Rock, Pennsylvania. Ms. Tate helped several District Councils in the Oklahoma and Texas areas during the past year. Ms. Tate also helped the National Secretary in securing a site for next year's annual conference in San Antonio, Texas. In the picture, Chairman of the Federal Mine Review Commission, Ford B. Ford, presented the award to Ms. Tate on May 28, 1992.

# Watch your back— Prevent back injuries

by John Cunningham  
*Metal and Nonmetal Mine Safety and Health, Arlington, Virginia*

Back injuries account for about one fourth of the lost-time injuries in the mining industry. Many of these injuries could be avoided if miners practiced a few basic and simple rules for back conservation.

The back is a complex system consisting of five distinct spinal regions. The lumbar spine—the five vertebrae and six disks in the curved portion of the lower back—is the part most often injured. Lifting, bending, and twisting motions (on or off the job) can cause severe injury and pain. Because the lumbar region of the back area is at greatest risk during normal work, it deserves to be the main focus of back conservation and maintenance attention.

## Lumbar conservation

Try to minimize the need to move materials manually. Proper planning and good job design can eliminate much lifting. The use of mechanical lifting aids can be a back-saver. However, if you must lift, remember that your body is not a crane; your back is not designed to “boom up” or “boom down” or “boom to the side” with ease.

Therefore, when lifting and carrying a load:

- Examine the load for grease, oil, sharp edges, and other hazards.
- Know your limit and halve it; estimate the weight and divide the load

or get help if the weight is more than you can comfortably handle.

- Plan your path and make sure that it is free of obstructions. Consider how you will set down the load—before you lift it.

- Stand close to the load with your feet spread apart (at about shoulder width), with one foot in front of the other for balance.

- Do not twist your body to get into position.

- Squat down and tuck in your chin, while keeping your back as straight as possible.

- Grasp the load firmly.

- Lift with your legs by slowly straightening them.

- Return your back to a vertical position.

- Turn only with your feet; do not twist your torso while you are lifting or carrying a load.

- Avoid, if possible, lifting a load from below your knee level or from above shoulder level; both maneuvers, unless done very carefully, create great stress on the disks in the lumbar region.

- Carry the load close to your body. Avoid, if possible, any lift where the load's center of gravity is more than a few inches out from your stomach; the stress on the lumbar region multiplies quickly as the center of gravity moves out from the spine.

- The squat down, lift with the legs maneuver does not come naturally to most miners and it is more tiring than the traditional bent-back lifting technique. Yet its one great virtue—protection of the lumbar spine—makes it a maneuver well worth the extra effort.

- While mucking (shovelling):
  - Make certain that the material is loose.
  - Don't overload your shovel.
  - Bend your knees and hips.
  - Keep your back in reasonably straight alignment.
  - Use a long-handled shovel if space permits.
- And remember the old refrain—  
"The human body is not a crane."

### **Lumbar maintenance**

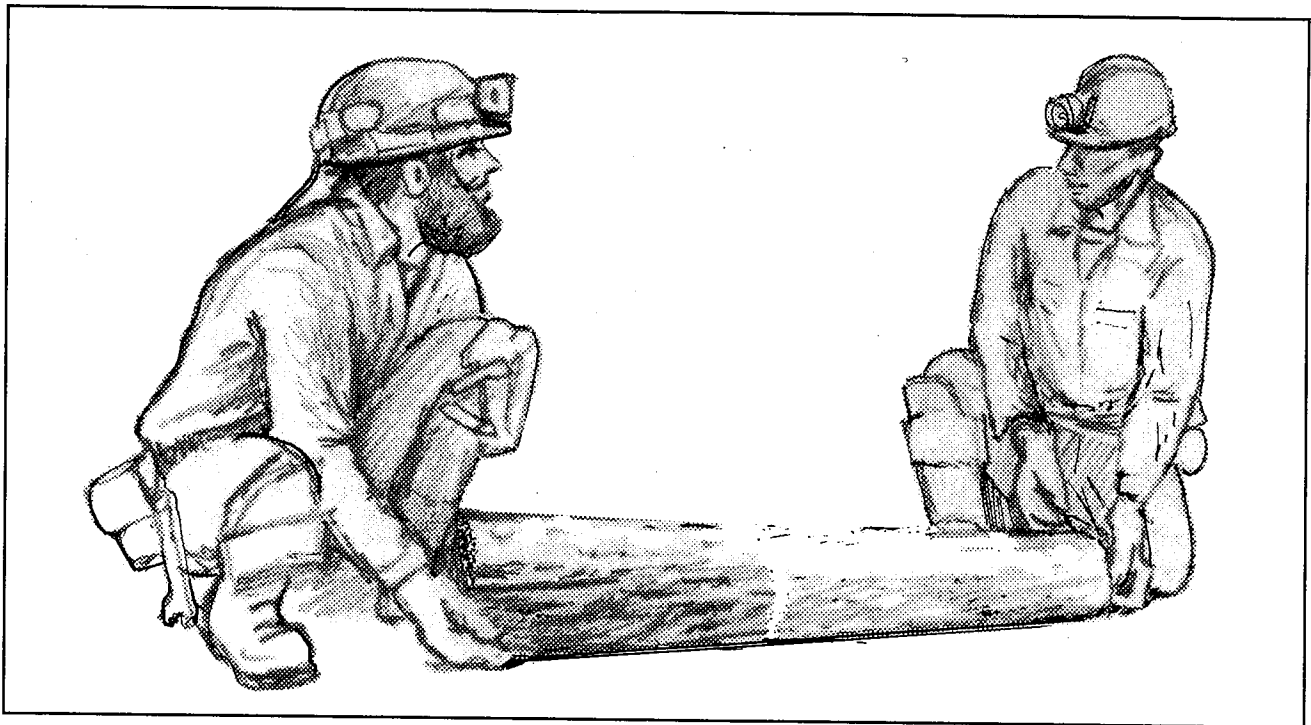
Exercise your back regularly; back conditioning starts with body conditioning. The torso muscles are all interconnected; you must strengthen all of them to help your back. Concentrate

on the exercises that strengthen each side equally, for example: low-impact aerobics, high-speed walking, rowing, and swimming. Machines that allow you to simulate rowing, stair-climbing, or cross-country skiing at home are useful for back conditioning. Exercises that strengthen the lifting power of the legs can help the back by allowing the legs to do more of the heavy lifting.

Be wary of activities with many sudden changes of direction or unnatural twisting, such as tennis and golf. Even runners may injure their backs, especially if they don't do enough stretching. Tobacco smoking diminishes the supply of oxygen and nutrients to the disks that cushion the vertebrae; thus, smokers are at increased risk of back trouble. Eliminate, or at least diminish, your use of tobacco; your back will be better for it.

And again, remember the old refrain—

"The human body is not a crane."





# National metal and nonmetal mine rescue contest

The 1992 National Metal and Non-metal Mine Rescue Contest was held on August 12-13, 1992, at the Convention Center in Las Vegas, Nevada. The team and benchman winners are listed below.



## Mine Rescue Contest winners are:

**First Place: Rhone Poulenc - White Rhone Poulenc of Wyoming**  
Green River, Wyoming

**Second Place: Homestake Gold**  
Homestake Mining Company  
Lead, South Dakota

**Third Place: Tg Gold**  
Tg Soda Ash, Inc.  
Granger, Wyoming

**Best Visiting: WIPP Silver**  
Westinghouse Electric  
Carlsbad, New Mexico

## Benchman's Contest winners are:

**First Place: Leslie Wareham\***  
General Chemical Partners  
Green River, Wyoming

**Second Place: Doug Wadsworth**  
General Chemical Partners  
Green River, Wyoming

**Third Place: Leroy Lanphear**  
Stillwater Mining Company  
Nye, Montana

**Best Visiting: Fred Miller**  
Westinghouse Electric  
Carlsbad, New Mexico

\*Note: Ms. Wareham is the first female ever to win the Benchman's Contest.

# Excellence in safety and accident reduction at two western Kentucky mines

## Retiki's "team safety" assures reduction in mine accidents

Webster County Coal Corporation's 145 miners at Retiki Mine can boast an outstanding 1991 for their significant reduction in overall mine accidents. The Retiki Mine is located in Henderson County in Western Kentucky.

Paul Coy, Safety Director at Retiki, credits their outstanding record to the Team Concept Safety Program. This program, developed in 1989, has elevated each miner's safety awareness and has motivated crew members to sustain their excellent work performance. Incentive awards are offered to each team and team member who works the longest period of time without a lost time accident.

In 1991 Retiki's incident rate (which measures injury frequency rates) was 1.87, down from 7.5 in 1990, which complemented a production record of 1,200,134 tons. The national average incident rate for 1991 was 12.22. This outstanding performance enabled Retiki to win the MAPCO President's Safety Award and the MSHA District 10's Sentinels of Safety Award from the Holmes Safety Association.

Retiki's safety performance level has improved significantly over the last three years. Safety Director Coy is proud to admit that he is part of the Retiki team because, "In spite of the tough physical demands of a 46" seam height, conventional mining methods, and materials-intensive production, the

miners work well as a team and have made safety their primary goal."

## No fatalities in twenty years of mining

Peabody Coal Company's Camp No. 2 Mine near Morganfield, KY, worked more than two decades and mined nearly 28 million tons of coal without a fatality before closing June 30, 1992, as its reserves depleted. This is particularly noteworthy considering the characteristically bad top found in the Number 9 seam there.

Productivity and safety have gone hand-in-hand at the underground mine. With a teamwork attitude on the part of all, Camp No. 2 employees consistently improved their efficiency and achieved an enviable safety record as well.

The continuous miner operation employed as many as 580 people using eight production units in the late 1970's. In recent years, it produced one-fourth more tonnage annually with 350 employees using five continuous miner units.

As Camp No. 2 depleted its reserves, Peabody Coal Company brought its nearby Camp No. 11 Mine back into production. They are part of a three underground mine complex which includes a preparation plant and a barge loading facility, together employing 800 local residents. The facilities ship nearly 5 million tons of coal annually to TVA's Cumberland Station in Tennessee under a long-term contract.

## Wolf Creek Collieries hosts unique mine rescue competition

On Saturday, April 25, 1992, Wolf Creek Collieries hosted their Ninth Annual Underground Mine Rescue Contest at their Number 4 Mine in Martin County, Kentucky. This year's event featured a four team underground mine rescue competition, a full scale surface emergency preparedness drill, and a skills training exercise for Emergency Medical Technicians.

The competition introduced a unique concept this year. When the first team was halfway through the rescue/mine exploration, they were instructed to return to the fresh air base, brief the back-up team and give their map to the back-up team for completion of the problem. The back-up team was then instructed to complete the rescue/mine exploration portions of the problem. The third and fourth teams in the contest also competed on the same basis with their discounts being combined. This concept was designed into the problem to promote a realistic, teamwork approach to mine rescue. Of the four teams competing (two groups of two), the combined team of **Wolf Creek Collieries and Interstate Coal of London, KY, won first prize**. Second place went to the combined team of Arch of Kentucky from Cumberland, KY, and Jewell Smokeless of Vansant, VA. Team members from each team competing acknowledged that this contest challenged their mental and physical skills, and each team expressed an overall appreciation of the contest format.

The surface emergency preparedness exercise featured a six-hour drill

designed to sharpen the skills of Wolf Creek personnel responsible for surface organization in the event of a mine emergency. Wolf Creek employees, with the assistance of the Mine Safety and Health Administration and the Kentucky Department of Mines and Minerals personnel, directed activities of crews involved in a mock underground mine emergency and conducted periodic conferences with members of the news media. The Emergency Medical Technician portion of the program involved rescue and treatment of miners supposedly trapped inside and underneath mining equipment. The extraction and treatment of the "victims" by Wolf Creek E.M.T.'s was conducted simultaneously with the mine rescue contest and surface emergency preparedness exercise.

This ninth annual event at Wolf Creek Collieries was described as an "overwhelming success" by all groups participating. At the awards presentations following the day's activities, Kentucky Department of Mines and Minerals Commissioner, Burl Scott, stated "There are no winners and losers here today. Everyone who participated in this event is a winner. Each of us has learned valuable lessons that will not only help us to deal with mine emergencies, but will also help us to avoid them. Mine rescue, mine emergency preparedness, and E.M.T. training are three of the best tools available to us in preventing mine emergencies and disasters."

*These articles reprinted from the Commonwealth of Kentucky, Department of Mines and Minerals Bulletin, Volume II - 1992.*

# Ten ways to be safer and healthier

A number of years ago, the American Council on Science and Health developed a list of ten suggestions to make our society healthier and safer. These suggestions are as appropriate now as when they were first published. They certainly are worthy of being repeated. They are as follows:

1. If you don't smoke, don't start, and if you do smoke, stop. Hundreds of thousands of Americans die each year from smoking-related diseases. Smoking is the leading cause of preventable health-related death in this country.
2. Don't mix drinking with driving. Over half of the traffic deaths each year are attributable to alcohol.
3. Adopt a sensible diet. At any given time, millions of Americans are on diets. Unfortunately, most fad diets are unsound, and some can be harmful. Stick to a reasonable, gradual diet and exercise program that encourages better eating habits. Check out your weight loss program with your physician.
4. Exercise regularly but don't overdo it. With the growing realization that physical activities are good for health, millions now engage in some form of exercise. Take time to get into good physical condition by choosing the types of exercise that are appropriate for you.
5. If you drink, do it in moderation. Excessive alcoholic consumption not only increases your risk of having an accident, it is also associated with cirrhosis and other liver diseases, and disorders of the heart and nervous system.
6. Monitor your blood pressure. High blood pressure is a common disorder. Keeping it under control will reduce your risk of developing heart disease, stroke, or kidney failure.
7. Use safety belts. Safety experts estimate that thousands of lives would be saved each year if everyone buckled up.
8. Make sure there's a working smoke detector in your home. Thousands die each year in residential fires because they are not warned in time to flee to safety.
9. Be a cautious consumer of health information. A great deal of health advice is unsound, and some of it is potentially dangerous. Rely on reputable medical personnel only.
10. Focus your attention on those things that really matter. Too many people are far more concerned about trivialities or matters beyond their control than they are about the dangers of alcohol, tobacco, overeating, lack of exercise, safety, etc.

*Reprinted from the Commonwealth of Kentucky, Department of Mines and Minerals Bulletin, Volume II - 1992.*

# Holmes Safety Association Monthly Safety Topic



## Fatal fall of roof accident

**GENERAL INFORMATION:** A 23-year-old ramcar operator with 18 months of experience was fatally injured in a roof fall at an underground coal mine.

**DESCRIPTION OF ACCIDENT:** The section foreman held a meeting with the 6 Left Tailgate Development section crew on the morning of the accident. He explained to the crew how to do rehabilitation work on a previously caved area in the No. 3 entry between crosscut Nos. 71 and 72. The plan called for the installation of steel crossbars beginning under supported roof on both the inby and outby ends of the faulted area. The crew would work toward each other until the last span (approximately 20 feet) could be supported by laying galvanized metal beams skin-to-skin across the last set of steel crossbars.

The crew proceeded to the section after the meeting where they were met by a leadman and a continuous miner operator. Work began after the place was checked for hazardous conditions. To reduce the air slacking and the spalling of rock throughout this area, approximately 30 yards of shotcrete had been applied 3 to 4 days before the accident occurred.

Measurements were taken and the first sets of crossbars to be installed on the outby end were cut. The steel sets had been unloaded in the No. 3 entry at about No. 73 crosscut, where they were cut to length. The foreman decided that the safest way to move the sets to where they were needed would be to load them on the head of the continuous miner and remotely tram them to the work area. After shutting off the breaker to the cutter head, the machine was trammed remotely through the unsupported top to the outby work area. With the head of the continuous miner positioned under supported roof, the support leg on the east side of the entry was positioned. The victim and a foreman stood on the head of the machine, remeasured for the crossbar, and found it was about 18 inches too long. The victim stood on the ground in front of the machine and cut the first bar to the proper length. He then climbed onto the head of the machine, and kneeling with his back to the west rib, began to cut the second crossbar. The west rib and associated rock roof collapsed without warning and buried him completely.

The victim was extricated, removed from the mine, and taken to the hospital where he died from his injuries.

**CONCLUSION:** The accident occurred because of failure to make adequate examinations of the mine roof and failure to comply with the

approved roof control plan where adverse conditions were found or anticipated.



**MEANS OF PREVENTION:**

1. Test the roof and ribs where working.
2. Comply with the Approved Roof Control Plan.

# Conferences

## Health and safety workshop

The Mining Section of the National Safety Council and the Arizona State Mine Inspector will hold an International Health and Safety Workshop November 18-20, 1992, at the Rio Rico Resort, Rio Rico, Arizona. The registration fee for the conference is \$25.

The Second Annual International Health and Safety Workshop includes an agenda of many pertinent subjects taught by knowledgeable educators and leaders throughout the country.

Some subjects included in this innovative program will be:

- Drugs and the Workplace
- Employee Motivation
- Tools for the Safety Supervisor
- Inspection Rules and Regulations
- Practical Inspection Procedures
- Rock Product Safety
- Personal Protective Equipment
- Gas and Dust Protection
- Breathing Devices
- Ground Control
- Truck and Heavy Equipment Safety
- Safety Around Bins and Hoppers
- Job Safety Analysis

Each of these sessions will be delivered on November 18 and 19, enabling all attending to make each class. The last day consists of several round table discussions on pertinent subjects.

For more information please contact the Arizona State Mine Inspector's Office at (602) 542-5971.

## Safety conference

On February 17, 1993, the Pennsylvania Department of Deep Mine Safety, the Northeast Metal/Nonmetal District Office, and the Pennsylvania Aggregate Association are sponsoring a joint safety conference at the Hershey Convention Center, Hershey, Pennsylvania. The topics included on the agenda for the conference are:

- Job Safety Analysis
- Substance Abuse
- Explosives Safety
- Stockpile Safety
- The New Liability Act

For more information, please contact Matt Bertovich at (412) 439-7460.

# Sentinels of Safety Awards for 1991

The 1991 winners of the Sentinels of Safety Awards, the Nation's most prestigious industrial safety award, were announced June 17th by its co-sponsors, the Mine Safety and Health Administration of the Department of Labor and the American Mining Congress. Declared the safest mines in their categories for 1991 were:

**SURFACE COAL:** Colowyo Mine, Colowyo Coal Company, Meeker, Colorado—735,755 injury-free hours.

**UNDERGROUND COAL:** Number 2 Mine, Jade Energy, Inc., Williamson, West Virginia—126,943 hours.

**UNDERGROUND METAL:** Jefferson Zinc Mine, Jefferson City Zinc Division of Union Zinc, Inc., Jefferson City, Tennessee—188,858 hours.

**UNDERGROUND NONMETAL:** Nash Draw Mine, Western Ag-Minerals Company, Carlsbad, New Mexico—193,711 hours.

**OPEN PIT:** Magma Open Pit, Magma Copper Company, San Manuel, Arizona—484,885 hours.

**QUARRY:** Three Rivers Quarry, Dravo Basic Materials Company, Smithland, Kentucky—173,164 hours.

**BANK OR PIT:** Bonsal Mining Division, W.R. Bonsal Company, Lilesville, North Carolina—144,319 hours.

**DREDGE:** Millville Plant, U.S. Silica Company, Newport, New Jersey—85,755 hours.

The national safety contest, held annually since 1925, honors the mines in each of eight categories that have worked the most employee-hours during the year while suffering no lost-time injuries.

To be eligible for the Sentinels award, a mine must have accrued at least 30,000 injury-free hours, but the winning operations far exceeded that. In fact, one mine worked more than 700,000 employee-hours without a single lost-time injury in 1991.

The purpose of the 63-year-old Sentinels of Safety program has been to promote greater interest in mine safety, and development of more effective accident prevention programs, by according national recognition to operations achieving the Nation's best safety records.

Each operation will be awarded the bronze Sentinels trophy, a green and white Sentinels of Safety flag, and Certificates of Accomplishment for each employee.

The trophy, sculpted in 1925, will reside at the mine for a year, then be replaced by a full-sized replica.

*Reprinted from Southwestern Pay Dirt, P.O. Drawer 48, Bisbee, Arizona 85603*



## The last word...

"Specialist: Someone who knows more and more about less and less."

"It is not half as important to burn the midnight oil as it is to be awake in the daylight."

"Fear not that thy life shall come to an end but rather fear that it shall have no beginning."

"Becoming number one is easier than remaining number one."

"You have to adjust your running style when you're running on ice."

"The only thing we learn from history is that we do not learn."

"Sacred cows make great hamburgers."

"Well done is better than well said."

"What's done to children, they will do to society."

"You know you're getting old when the candles cost more than the cake."

**NOTICE:** We welcome any materials that you submit to the Holmes Safety Association Bulletin. We cannot guarantee that they will be published, but if they are, we will list the contributor(s). Please let us know what you would like to see more of, or less of, in the Bulletin.

**REMINDER:** The District Council Safety Competition for 1992 is underway – please remember that if you are participating this year, you need to mail your quarterly report to:

**Mine Safety & Health Administration  
Educational Policy and Development  
Holmes Safety Association Bulletin  
P.O. Box 4187  
Falls Church, Virginia 22044-0187**

**Phone: (703) 235-1400**

