ABANDONED MINES

ATV rider killed falling into shaft

A man was killed after falling down a 50-foot mine shaft while four-wheeling Jan. 23 in Tooele County, Utah.

The 26 year-old victim and his brother-in-law were riding ATVs near the border of Tooele and Utah counties when they headed up a hill that appeared to have a flat surface. But on top of the hill is a mine shaft with an opening between 10 and 15 feet wide.

The victim who was apparently riding in front, drove directly into the hole and plunged about 50 feet with his vehicle.

The victim was carrying the cellular phone the pair had brought with them, forcing the brother-in-law to flag down other people in the area to call for help. Rescuers from Tooele and Utah counties rappelled down the hole and found the victim dead. A doctor at the scene said he believes he may have died shortly after impact due to massive head injuries. It was noted that he had not been wearing a helmet.

Reprinted from the February 5, 1999 issue (Vol. 6, No. 3) of Legal Publication Services' ***Mine Safety and Health News****.*

Hearing finds that two-thirds of abandoned Idaho mines pose danger

The Idaho Mining Assn. is proposing legislation this year that would target about $200,000 to seal off the most dangerous abandoned mines in the state.

The money would come from a license tax that mining companies pay. That tax, which totals 2% of net profits of all mines, has been in effect since 1935. The money goes into the state's general fund.

However, a bill before the legislature would divert one-third of the license tax collected each year into an abandoned mine reclamation account. The program would target only abandoned mines for which no owner can be found.

There has been a mine license tax, but those funds have gone into the general state treasury. They also vary from year to year with a high of $960,500 in 1998 to a low of $110,000 in 1993. However, no matter what the revenue, it would be more money than what is currently available, which is zero.

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Behavior of a limestone roof supported by spot bolting

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National Institute For Occupational Safety and Health

In this case study, a highly stressed limestone roof that would eventually fail was instrumented. This instrumentation was used to continuously monitor bolt loads, roof movement, temperature and humidity over a 9 month period. The only roof support in the test room was provided by the instrumented bolts thus making it a spot bolting system. Prior to the start of the roof failure, a direct correlation between a change in air temperature from mining and in bolt loads was established. Finally, the increase in air temperature caused by heat generated by mining equipment was sufficient to induce an added roof stress that triggered the failure process. Before mining was halted by roof activity, the room temperature reached a maximum of 110 degrees F. A fracture developed in the roof at a depth of about 1 ft. with a vertical displacement of 0.075 in. Once initiated, the failure continued to progress over a period of 3.5 months with no mining activity in the room during this time. Roof movements were small while maximum bolt loads although changing were less than 7,000 lb. However there was a continuous pattern of bolts loading and unloading across the room. Just before mining was resumed there was a sudden increase in the load on one bolt that reached 26,000 lbs. followed shortly by a sudden load decrease. This change in bolt load was associated with the development of another roof fracture at a depth of 2 ft. that indicated the roof had failed. A roof fall occurred adjacent to the instrumented area in the room shortly after mining was resumed while the roof with the bolts did not fall. In this roof failure, only the roof skin was affected while continuous monitoring of the instrumentation was necessary to capture the sudden roof movements and changes in bolt loads that occurred.

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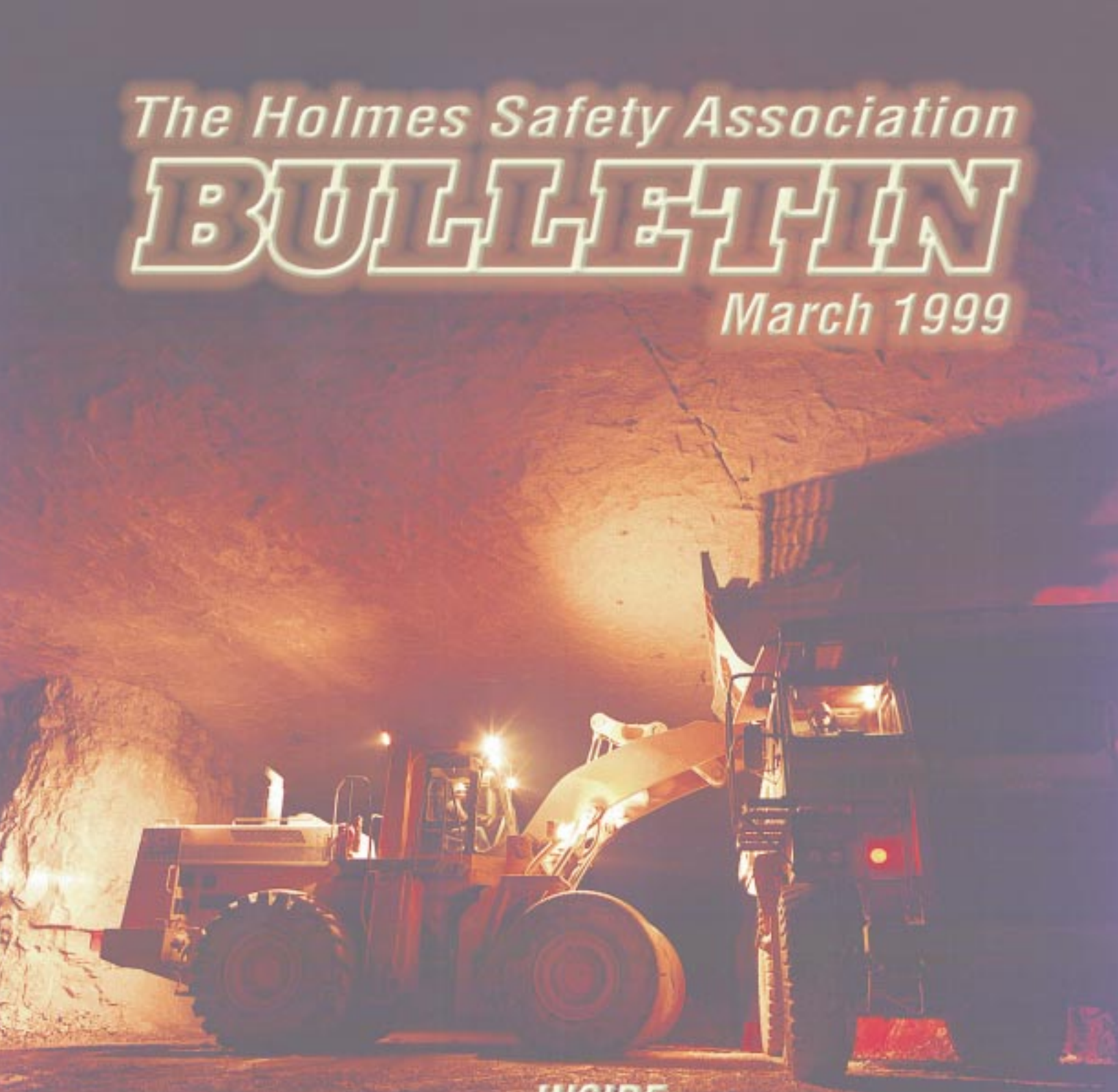
The Holmes Safety Association BULLETIN

March 1999



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HSA Bulletin March 1999

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The **Holmes Safety Association Bulletin** contains safety articles on a variety of subjects: fatal accident abstracts, studies, posters, and other health- and 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. For more information visit the *MSHA Home Page* at ***www.msha.gov***

PLEASE NOTE: The views and conclusions expressed in Bulletin articles are those of the authors and should not be interpreted as representing official policy or, in the case of a product, represent endorsement by the Mine Safety and Health Administration.

COVER: This outstanding photo was sent to us by David White, Safety Director for Hanson Aggregates East. The shot was taken by Leslie McGuire on Nov. 3, 1998 at Hanson Aggregates East, Harding Street Mine. Pictured in the photo is a Komatsu WA-600 loader, operated by Richard Calvin, dumping limestone into a Caterpillar 769-C 35-ton haul truck operated by Carl Eaton. The underground mine at Harding Street produces one million tons of crushed limestone each year. If you have a potential cover photo, please send an 8" x 10" print to the editor, Fred Bigio, MSHA, 5th floor—EPD #535, 4015 Wilson Blvd., Arlington, VA 22203-1984

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