

Dangers In and Around Abandoned Mines

The following article was originally released as a brochure by the Education and Training Division of the Arizona State Mine Inspector's Office. For further information, write to Arizona State Mine Inspector's Office, Abandoned Mines Program, 1616 W. Adams, Suite 411, Phoenix, AZ 85007-2627, or call (602) 255-5971.

Abandoned mines pose numerous hazards to the unwary curiosity seeker or amateur prospector. Whatever the potential for undiscovered treasure, the doubtful rewards are not worth the almost inevitable costs in disaster, dismemberment, or even death. The dangers that could be encountered in an abandoned mine include shafts, cave-ins, timber, ladders, explosives, water, bad air, and rattlesnakes.

Shafts

The collar or top of a mine shaft is especially dangerous. The fall down a deep shaft is just as lethal as the fall from a tall building, with the added disadvantage of bouncing from wall to wall and the likelihood of having falling rocks and timber for company. Even if a person survived such a fall, it might be impossible to climb back out.

The rocks at the surface are often decomposed. Timbers may be rotten or missing. It is dangerous to walk anywhere near a shaft opening; the entire area could slide into the shaft, along with the curious explorer.

A shaft sunk inside a tunnel is called a winze. In many old mines, winzes have been boarded over. If these boards have decayed, a perfect trap is awaiting the next hapless visitor.

Cave-Ins

Cave-ins are an obvious danger. Areas that are likely to cave in are often hard to detect. Minor disturbances, such as vibrations caused by walking or speaking, could cause a cave-in. If a person were caught, he or she could be crushed to death. An even worse scenario would involve being trapped behind a cave-in when no one else is aware of the situation. Death could occur through starvation, thirst, or gradual suffocation.

Timber

The timber in abandoned mines can be weak from decay. Other timber, although apparently in good condition, may become loose and fall at the slight-

est touch. A well-timbered mine opening can look very solid when, in fact, the timber can barely support its own weight. There is the constant danger of inadvertently touching a timber and causing the tunnel to collapse.

Ladders

Ladders in most abandoned mines are unsafe. Ladder rungs may be missing or broken. Some will fail under the weight of a child because of dry rot. Vertical ladders are particularly dangerous.

Explosives

Many abandoned mines contain old explosives left by previous workers. These are extremely dangerous. Explosives should never be handled by anyone who is unfamiliar with them. Even experienced miners hesitate to handle old explosives. Old dynamite sticks and caps can explode if stepped on or even touched.

Water

In many tunnels, water forms deep pools or conceals holes in the floor. Pools of water are also common at the bottom of shafts. It is usually impossible to estimate the depth of the water; a false step could lead to drowning.

Bad Air

"Bad air" contains poisonous gases or insufficient oxygen. Poisonous gases can accumulate in low areas or along the floor. A person may enter such areas breathing the good air above the gases, but the motion caused by walking will mix these gases with the good air, producing a possibly lethal mixture to be inhaled on the return trip.

Because little effort is required to go down a ladder, the effects of "bad air" may not be noticed. When climbing out of a shaft, however, a person requires more oxygen and will breathe more deeply. The result is dizziness, followed by unconsciousness. If the gas doesn't kill, the fall will.

Rattlesnakes

Old mine tunnels and shafts are among the rattlers' favorite haunts, to cool off in summer or to search for rodents and other small animals. Any hole or ledge, especially near the entrance of the tunnel or shaft, can conceal a snake.

Rescue Problems

No inexperienced person should attempt to rescue the victim of a mine accident. The county sheriff should be called instead because he or she is in the best position to organize a rescue operation.

Attempting to rescue a person from a mine accident is usually difficult and dangerous for both the victim and the rescuer. Even professional rescue teams face death or injury, though they are trained to avoid all unnecessary risks. It makes no sense to kill one person to rescue another. Everyone, adults as well as children, should consider these extreme dangers when they are tempted to enter abandoned mines.

Vandalism

Those who remove tools, equipment, building materials, and other objects from mines and buildings near mines do not go home with souvenirs, but with stolen property. Many mines that look abandoned are private property; they are only idle, waiting to be reworked. Warning signs and fences are there for a reason. Unauthorized removal or damage to signs or fences is a class 6 felony.

Safety Summary

There is only one safe way to deal with abandoned mines: stay out!

Workshop on Industrial Minerals of Arizona

The Arizona Geological Survey (AZGS) and the U.S. Geological Survey (USGS) cosponsored a workshop, titled "Industrial Rock and Mineral Resources of Arizona: Problems, Opportunities, and Recommendations," in Tempe, Arizona, May 17-18, 1988. Approximately 30 representatives from State and Federal government, the mining industry, Indian Nations, and academia, who produce or use resource data, were invited to participate in informal discussion sessions to identify research and data needs. A final session was devoted to presenting program recommendations to the AZGS and USGS, including better ways to meet user needs while maintaining applied and basic research competence. Workshop proceedings are being prepared for publication.