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MINE SAFETY

The points mentioned in the list given below are a few of the most obvious dangers which will confront the explorer of old mine workings. Many of these dangers are not readily apparent to the casual visitor.

1. Bad air is often present in old workings and this is particularly insidious since its effects are often gradual and not appreciated until it is too late to escape.
2. The older mines were often driven in soft ground for ease of driving, and such ground is now often unstable and liable to collapse.
3. An accumulation of mud or water on the floor of a tunnel may well disguise the fact that there are open, but water filled workings, winzes or shafts in the bottom of the level.
4. Where a tunnel is dry underfoot, the floor may be set on old timbering which was set above open stopes and is now rotted to the point where it is liable to sudden collapse.
5. Ladders and stagings in old workings have probably been in place in a damp atmosphere for many years and have most certainly become rotted to a dangerous state.
6. Old shafts are particularly dangerous, since even though they may appear to be soundly walled or timbered when looking down from the top, such walling was often set upon a timber frame, and this will probably be rotten, thus rendering the whole structure unsound. In addition, old shafts are particularly liable to an accumulation of either poisonous or explosive gases.

The exploration of old mineworkings is little covered by any published advice and assistance to those who wish for experience. It is not possible in a few paragraphs to cover every possible situation encountered underground, but the following hints are offered.

1. NEVER explore old mineworkings alone.
2. ALWAYS tell someone responsible outside where you are going and what you hope to achieve, after obtaining permission to explore the mine.

MINE SAFETY

3. ALWAYS carry a candle or safety lamp with you. Also have plenty of matches with you in a watertight container.
4. ALWAYS test the atmosphere by lighting a candle or safety lamp from time to time, especially if you feel no ventilation current in the mineworking. If a candle or safety lamp will not burn GET OUT AT ONCE. A carbide lamp will not suffice for this purpose since it will continue to burn when the atmosphere is not fit to breathe.
5. NEVER interfere with old hopper mouths or timbers as they may be rotten and disturbance may cause a serious collapse.
6. ALWAYS keep an eye on the floor of the tunnel as well as the top. Beware of any open holes in the floor, as there are often false floors around shafts and sumps.
7. ALWAYS carry a stout stick or shovel if the tunnel has a stream of water or soft mud in it. Use the stick to poke the floor ahead of you, as you go. A ducking in such conditions may well be exceedingly dangerous.
8. NEVER try to climb up or down old ladders.
9. NEVER try to descend an old shaft or winze until a candle or safety lamp has been lowered to ascertain that the air is breathable.
10. ALWAYS carry some food and drink with you on such explorations in case you become trapped and have to await rescue. An ex-Army watertight ammunition tin is particularly suitable for this purpose. Suitable foods are dates, milk chocolate, cheddar cheese, butter and sweet biscuits.
11. ALWAYS wear suitable clothing to protect you against dirt, cold or wet, and always wear a safety helmet underground. Remember that all mines have a very high humidity.
12. Remember that your carelessness in omitting any reasonable precautions may lead to extreme danger or loss of life not only to yourself, but to other persons who may have to rescue you or your body from a mineworking.

IF IN DOUBT - DO NOT GO UNDERGROUND

(Based upon an article by J.R. Foster-Smith in Transactions 1, 2. 1964)