



## Mines Safety Bulletin No. 152

**Subject:** Hazards associated with accessing unoccupied mines for recreational purposes

**Date:** 22 June 2018

### Background

Mines are designed, constructed and maintained to be safe while in operation. However, once work ceases, mines can fall into disrepair and become increasingly hazardous. Some mines may not be active and are under 'care and maintenance' or 'suspension' while others remain undocumented or unknown.

Unoccupied mines can present a serious hazard to anyone participating in recreational activities such as swimming, abseiling, rock climbing, hiking, dirt biking, using water-going equipment or driving off-road. There have been several fatal accidents after unauthorised access (whether intentional or inadvertent) of unoccupied mines by members of the public for recreational purposes.

- In 2018, a jet skier suffered serious injuries in a collision with another jet skier on a body of water in an open cut. He died on the way to hospital.
- In 2017, a man suffered serious injuries and drowned after jumping into water at a disused quarry.
- In 2016, four people entered an open cut to go jet skiing on the body of water in an open pit. One of the people walked along the highwall of the pit and fell in, suffering fatal injuries.

*Note: Highwalls are the excavated near-vertical cliffs in surface pits and quarries.*

- In 2015, human remains were found at the bottom of a mineshaft. They were confirmed to be the remains of a missing prospector.
- In 2011, a woman died after falling into a quarry. Her photographic equipment was located nearby.



Hazards associated with water-filled unoccupied open pits may be less obvious. Hazards may include unstable highwalls around the pit and hidden obstacles beneath the water's surface.

## Summary of hazard

Many hazards associated with unoccupied mine sites may not be obvious, but can pose serious risks to anyone entering. Hazards include:

- water (e.g. low temperatures, high alkalinity, high acidity, microbial contamination)
- rockfalls and roof collapses [e.g. unstable highwalls, rotting timbers and unstable rock formations in horizontal mine openings (adits)]
- hidden vertical shafts and edges of highwalls
- dangerous atmospheres [e.g. oxygen deficient air, unsafe levels of poisonous gases such as methane (CH<sub>4</sub>), carbon monoxide (CO) and hydrogen sulfide (H<sub>2</sub>S)]
- radioactivity [e.g. naturally occurring radioactive decay product such as radon gas (Rn)]
- unstable explosives (e.g. ageing and deteriorating blasting caps)
- dangerous chemicals (e.g. cyanide, arsenic and mercury leaking from deteriorating containers)
- wildlife (e.g. snakes).



Abandoned mine workings, showing underground tunnel (A) and vertical shaft opening (B).

## Contributory factors

- Inadequate barricading or signage to existing workings.
- Deterioration of safety signage.
- Unidentified or obscure existing workings (e.g. hard-to-see vertical shafts).
- Poor visibility (e.g. darkness inside mines, hidden hazards under water).
- Deliberate disregard of safety signage or barricading by members of the public.
- Use of social media to promote an unoccupied mine site for recreational purposes.

## Actions required

Report any damaged fencing, gates or bunds at unoccupied mine sites to the Department of Mines, Industry Regulation and Safety, on 1800 SAFE MINE (1800 7233 6463).

### ***By mining companies and mine owners:***

Mining companies are reminded of their requirements to secure unoccupied mine sites against unauthorised access. The following actions are recommended:

- Maintain fences, gates, bunds and barricades to prevent unauthorised access.
- Periodically assess the adequacy of signage, fencing and bunding.
- Consider initiating prosecution under trespassing laws.
- Track social media posts that encourage access to their unoccupied sites and post cautions.

***By the public:***

Members of the public are reminded that unoccupied mines should not be accessed for recreational purposes. Access is not safe and there is no infrastructure or support on site for emergency response to incidents. To ensure the safety of members of the public, the following actions are recommended:

- Stay away from unoccupied mine sites.
- Take precautions when travelling into unfamiliar areas (e.g. check with appropriate authorities).
- Do not remove or break down fences, gates, bunds or barricades to gain access.

**Further information**

- Department of Mines, Industry Regulation and Safety, Mining safety publications, [www.dmp.wa.gov.au/Safety/Mining-Safety-publications-16162.aspx](http://www.dmp.wa.gov.au/Safety/Mining-Safety-publications-16162.aspx)

*Old mine workings – pamphlet*

Danger of old mine workings (web page)

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