

SOUTH AFRICAN



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REPUBLIC OF SOUTH AFRICA

CIVIL AVIATION AUTHORITY

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OPERATION OF AIRCRAFT

SAFETY

OVERFLYING OPENCAST MINES AT LOW ALTITUDES

1. Most opencast mining operations carry out blasting to break rock, i.e. overburden and ore. Blasting involves the drilling of vertical blast holes into the pit benches, charging these with explosives and detonating the explosives.
2. The blast hole diameter can vary from 75 mm for small operations to 310 mm for large mines. The depth of the holes also vary from 2 m to 13 m.
3. The quantities of explosives involved varies from a few kilograms to tens of kilograms per hole. For instance a 13 m long, 310 mm diameter hole can contain some 80 kg of explosives. In large operations several hundred holes may be detonated in less than on second.
4. Blasting results in concussion waves in the air, as well as debris. While mines take measures to limit the effect of blasting, airborne debris cannot be ruled out.
5. Blasting may take place daily or every few days. While mines take precautions to ensure that the area around a blasting site is cleared of persons prior to detonation, it is not possible to clear the airspace as well. It is also not possible for a pilot overflying a mine to discern that blasting is about to take place.
6. It is therefore advisable for aircraft to maintain a safe altitude when flying over opencast mining operations. It has been suggested that safe altitude is 1500 m (5 000 feet) above ground level.

COMMISSIONER FOR CIVIL AVIATION