



**DEPARTMENT OF MINERALS AND ENERGY  
WESTERN AUSTRALIA**

**SIGNIFICANT INCIDENT REPORT NO. 76**

**STORM WATER INFLOW INTO DECLINE MINE**

**INCIDENT**

A decline mine access, which was commenced from the base of a box cut taken down through weathered ground, had been advanced some 300 metres. The area was already saturated by rainfall and a very heavy storm caused a rapid inflow of an estimated 200 tonnes of water to run down the decline, almost covering the face of the lowest heading.

The inflow was confined to the volume that fell on the surface area of the box cut, and did not include drainage from any wider area.

Whereas in this case there was no injury to personnel or immediate risk of immersion to persons in the decline, no sump or pumping equipment was installed with sufficient dewatering capacity. This resulted in the immersion of a jumbo, which was in process of drilling rock bolt holes at the time of the inflow.

Under different circumstances, with a different configuration and distribution of personnel, the consequences may have been more serious.

**PRECAUTIONS AND PREVENTATIVE ACTION**

The hazards of draining of extensive areas of flat lying country into underground mines during regional flooding are well known and widely and regularly reiterated. However the hazard from this type of situation may be less well appreciated.

A logical precaution is to provide a sump at the base of the box cut, configured to trap most of the catchment area, and equipped with a high capacity submersible pump to minimise the inflow to the decline.

Alternatively, such a sump should be constructed at the most effective underground location off the decline, again configured to trap the bulk of any inflow, and at the least practicable depth to allow for rapid dewatering against a moderate head.

This will provide for a greatly increased margin of safety for underground personnel and also minimise loss of production and damage to equipment, roads and installations.

Mines with decline access should review their situation in the light of this experience.

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**SAFETY AWARENESS SAVES LIVES**