INCIDENT
There was an explosion under the bucket of a face shovel while it was digging. The shovel was badly damaged.
No one was badly hurt, but there could have been very bad injuries.

CIRCUMSTANCES
A shovel was digging in an open cut mine during the night shift. There was an explosion under the shovel’s bucket. Flyrock hit the shovel and a drill rig nearby.
No one told the shovel operator about any possible misfired holes which might still have been in the ground.
It was hard to see if there was any sign of a misfire because of the artificial night lighting.

INVESTIGATION
Some holes were misfired in the first firing of the area two days before. Some holes were still misfired after a second firing.
Communications were not clear between the day shift and the night shift about the result of the refiring.

RECOMMENDATIONS
1. Competent shotfirer to check each blast for misfires.
2. Develop and implement a risk-assessed procedure for dealing with misfires.
3. Investigate different systems to assess blast control and potential misfires.
   eg:
   • Video and blast monitoring equipment to check each hole has fired as planned.
4. Train crews in misfire safety procedures.
5. Review blasting procedures whenever a misfire occurs.