

Media Release

## **Mineware system assists with backfill safety**

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The Mineware backfill management system, developed and implemented at Northam Platinum around five years ago, was recently introduced at Gold Fields South Deep Mine - having been customised to suit Gold Fields' particular requirements. What's more, the company was recently recommended by the DME on all mines with an impressive 5/5 rating.

According to **Ken Ansell** of Mineware, as a method of mining support, the backfill system is expensive, but far safer than anything used previously. "With this system, areas of about 2 m in depth are taken out of the ground and backfill is used to secure the void. In conventional workplaces, the backfill is pumped into canvas bags. The volumes are calculated beforehand and the bags are filled in accordance with the demand."

Where drifts typically measuring 5 x 10 m are cut, backfill – a mix of binding agent and tailings from the mine – is pumped directly into the area to stabilise it. The process takes one to two weeks, with a 28-day drying time, which gives a hardness factor of 0,8 mpa. Once the correct hardness is reached, the drift alongside the backfilled section is safe to mine.

"The process has been around for some years," says Ansell. "Mineware's software calculates the formula according to fill, runoff factor, size of area and pressure required. It indicates what's being pumped down each mine - typically 28 cubic litres per second."

The Mineware system was designed with safety as a priority. Once the parameters have been set, scheduling can take place. Certain requirements must be met to allow the mine to plan, monitor and then track the entire operation. Authorisations are stringent, requiring survey signoffs that are flagged to appropriate staff for signatures. Every step is tracked and signed off, to ensure that procedures are followed precisely.

"The software makes it easier for management to review the entire process, and removes delays that the paper-based system produced. Procedures are signed off digitally, then printed for backup purposes."

The Mineware system reduces delays by allowing for problem logging and analysis, which can be surveyed daily to ensure work is on track. "There's more accountability," says Ansell, "and issues that crop up regularly can be flagged and dealt with before implementing other procedures."

Because everything is tracked, safety mechanisms are monitored more easily. Following pre-determined processes and getting the appropriate signoffs prevents staff from moving off plan and possibly starting work in unsafe or unready areas.

So far, Gold Fields has implemented Mineware's CPM system, bonus system, accident management system and backfill system. Its ISIS seismic tracking system is linked into the loop, and all systems are all currently being tested to run in tandem with one another.

"Because safety is paramount in this industry, the more electronic checks that can be affected, the better," says Ansell. Mineware continues to develop a range of products that answer to the needs of an ever-changing industry, with safety, accuracy and efficiency top-of-mind.



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