

Digital geological mapping; payoffs, pitfalls and pathways to successful mapping digitalization.

N Anderson, BSc (Hons), MSc, MAusIMM¹,

1.Product Manager - GeoTools, Deswik, Brisbane, QLD 4000, Nick.Anderson@Deswik.com

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ABSTRACT

Collecting geological data in a mine production environment, whether open pit or underground is a core activity of most mine geology departments. It is activity that is usually requires a very fast turnaround and feeds into key decision making. To ensure geological data is recorded consistently and quickly and is available to all stakeholders, many sites have turned to digital mapping to help.

Often, mine geologists see the change to digital mapping as simply swapping out 'drawing on paper' to drawing on a digital device. However, it provides the opportunity for much more. For example, digital data at the face allows geologists to see previous mapping, sampling, drilling and what the orebody interpretation expects us to see here. Access to this data while standing at a rock face allows geologists to really think about the geology and its true three-dimensional context. Since digital mapping also means that the face data is captured at the time, within a digital model of the mine, it frees up time otherwise spent in the office rehandling and registering paper maps in desktop software.

The journey to digital mapping is not always easy though, and there can be challenges along the way. These challenges can include technical (access to hardware, software, and data), organisational (access to training) and individual (adapting to change). Suddenly, there are many moving parts required to map a face!

Digital data collection when inter department data sharing is easy can significantly improve collaboration between groups and open new opportunities for better decision making and efficiencies.

Drawing from several case studies, this paper will examine examples where makes digital mapping a success, the benefits that were realised, pitfalls that were encountered on the way and how they were overcome.