

Advancing Geological Exploration: Epiroc Geoscience and GSWA's Collaborative Project on Hyperspectral Scanning of Drill Cores

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ABSTRACT

Epiroc has formed a Geoscience group within its OreBody Solutions business line. This has been done to enhance the value of subsurface data from exploration to production and ore processing. As part of this strategy, Epiroc has acquired key technologies over the last few years and has a strategy to review new technologies as they come to the market.

One of those technologies, hyperspectral imaging of drill cores has progressed significantly over the past decade and has marked a significant advancement in mineral exploration and analysis. Contemporary systems not only offer high-resolution mineralogical imaging but also integrate a diverse array of co-registered measurements, enhancing the depth and accuracy of geological assessments. This technological breakthrough, though relatively novel, is already finding diverse applications across both industrial and academic spheres, illustrating its versatility and potential.

In an effort to further harness and expand the capabilities of this innovative measurement technique, Epiroc's OreBody Solution Geoscience group has embarked on a collaborative project with the Geological Survey of Western Australia (GSWA). This ambitious initiative aims to provide comprehensive hyperspectral scans of critical geological cores and ore types, which are publicly archived by the GSWA, and make them publicly available. The project's scope is not only limited to advancing our understanding of existing geological resources but also extends to fostering research and innovation in the field.

A key component of this collaboration is Epiroc's open invitation to university researchers to actively participate in this endeavour. Researchers are encouraged to nominate specific drill cores relevant to their ongoing research projects for hyperspectral scanning. This unique opportunity enables researchers to access state-of-the-art hyperspectral data, which could significantly enhance the quality and scope of their geological studies. Through this initiative, Epiroc and GSWA aim to build a bridge between advanced technology and academic research, fostering a new era of geological exploration and understanding.