

## Exploring Australia for sediment-hosted copper: Insights from Northern Territory basins

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Sediment-hosted copper systems are increasingly important exploration targets in response to the global decline in mined copper grades and decreasing rate of discoveries. Major sediment-hosted copper provinces such as those in Zambia and the Democratic Republic of Congo highlight the scale and economic significance of this deposit style. In Australia, the Northern Territory hosts the greater McArthur and Georgina basins, which contain world-class sediment-hosted mineral systems including those at Mt Isa, McArthur River and Century, yet remain highly prospective and under-explored due to extensive cover and lack of deep exploration.

Exploration for sediment-hosted Cu systems is inherently challenging because these deposits commonly lack distinctive geophysical signatures and are frequently

concealed beneath cover, limiting the effectiveness of traditional exploration methods. As a result, successful exploration increasingly relies on a mineral systems approach. This focuses on identifying and understanding critical geological elements and processes required for deposit formation and their spatial relationships within a basin. This approach, first adopted in energy resource exploration, provides a robust framework for targeting concealed sediment-hosted copper systems.

This presentation will discuss how Encounter Resources is advancing our sediment-hosted copper exploration projects in NT regions with varying levels of data density and quality. It will outline an exploration approach based on building a coherent geological narrative from observations, collecting targeted new datasets to address specific knowledge gaps, and ultimately drilling to test well-defined hypotheses. The presentation will be illustrated through the company's Northern Territory portfolio, including Maryfield, Broadmere, Dunmarra and Sandover.

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