

POTASSIUM ISOTOPE TRACING AND NOVEL DATING OF POTASSIC ALTERATION ASSOCIATED WITH IRON OXIDE COPPER-GOLD SYSTEMS OF THE GAWLER CRATON

PHD PROJECT

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RESEARCH PROJECT

This project aims to investigate the timing and geochemical/isotope changes associated with potassic alteration which is commonly linked to IOCG (Iron Oxide Copper Gold) mineralization in the Gawler Craton.

The project will apply novel and coupled Rb-Sr and K-Ca geochronology, as well as stable K isotopes, to constrain the timing and sources of local and regional potassic alteration events and metalliferous fluids, and thus ore deposits.

The anticipated results, acquired from the field and laboratory experiments, will enhance our understanding of potassic alteration in IOCG systems, and consequently our understanding of an important mechanism in forming IOCG deposits, which contribute significant economic benefits to Australia.