

# CODES Post-Doc Opportunity

Characterisation and element dispersion in the regolith, DeGrussa VHMS copper-gold deposit: Implications for exploration

LOCATION | FORMATION | DISCOVERY | RECOVERY | TECHNOLOGY

## Project Outline

The DeGrussa copper-gold deposit (10.67 Mt @ 5.6% Cu, 1.9g/t Au 15 g/t Ag resource) in the Proterozoic Bryah Basin, Western Australia, is one of the most important recent VHMS discoveries in Australia. The research opportunities presented by the forthcoming open cut mining of this deposit offers some unique and important research opportunities for studying the weathering of the deposit, and multi-element dispersion of a large suite of ore-related elements in the regolith. This open pit and drill core based study of the will be undertaken as a collaborative investigation between CODES, CSIRO and Sandfire Resources NL.

## Specific Objectives

- Characterization of the mineral assemblages in the oxide-supergene profile of the DeGrussa deposit.
- Determine the geochemical (major and trace elements) composition of the oxide-supergene profile, and the principal host minerals in each zone.
- Investigate multi-element dispersion in the weathered wallrocks and, where possible, determine the host mineral.
- Relate the chemical and mineralogical characteristics of the weathered sulphide ore and its dispersion halo to the weathering and landform history of the region.
- Translate the research findings into practical exploration techniques for exploration in the Doolgunna district.

The project is envisaged as a team effort, driven by a full-time postdoctoral research fellow under the guidance of Prof. J. Bruce Gemmell at the ARC Centre of Excellence in Ore Deposits, University of Tasmania and Dr Charles Butt, CSIRO, Perth.

## Project Timetable

This project is available immediately and is to be completed in 2 years. It is anticipated that the post-doctoral fellow may have to spend at least 3 months in WA (Perth and on site) during the first year of the project, whilst mining progresses, and shorter periods thereafter. The remainder of the time in year 1 will be at CODES. During year 2 it is anticipated the post-doctoral fellow will be at CODES and/or CSIRO in Perth or Melbourne undertaking laboratory analyses, with less frequent site visits.

## Funding

This project is funded by Sandfire Resources and includes salary, travel and analytical costs. The appointment will be at Academic Level A5/6 and will have a total remuneration package of \$65,237 (year 1) rising to \$70,173 (year 2). Remuneration includes salary plus 17% superannuation.

## Selection Criteria

The candidate will ideally have a PhD with both geological and geochemical experience and expertise in oxide and supergene environments. Industry experience is highly desired. The candidate must have excellent interpersonal skills, in order to facilitate communication and technology transfer between CODES/CSIRO and Sandfire Resources. It will be essential for the successful applicant to meet deadlines and to report regularly to Sandfire Resources. The candidate will need to be able to spend long periods of time on-site, and to be flexible with regards travel, in case drill core or open pit exposures become available that require trips to be made to DeGrussa at short notice.

If interested please contact:

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