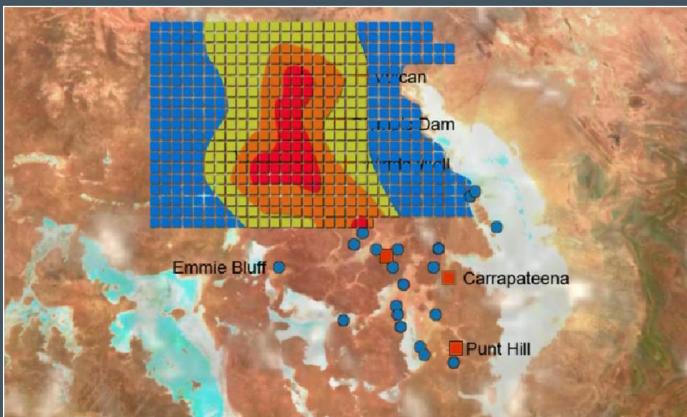




**DEEP EXPLORATION
TECHNOLOGIES CRC**
Uncovering the future

Project 3.4: Regional Mineral System Drilling for Targeting and Testing



PROGRAM 3: TARGETING

Program Leader	David Giles (University of Adelaide)
Project 3.4	Regional Mineral System Drilling for Targeting and Testing
Project Leader	Adrian Fabris (DSD)
Key Researchers	Simon Van der Wielen (University of Adelaide/DSD), Alan Mauger (DSD)
Participants	DSD, University of Adelaide
Timing	1 January 2014 – 31 December 2017
Cash Funding	\$448,000
In Kind Funding	\$3,501,000
Review Panel Chair	Greg Swain (Monax Mining)

“The implementation of the DET CRC deep prospecting strategy through a drill program and the successful integration of datasets collected from these drill materials will provide the exploration industry with confidence in new ideas and technology coming out of the DET CRC.” **Adrian Fabris, DSD**

OBJECTIVES

To test the DET CRC deep prospecting strategy by implementing a regional mineral system drilling program and thus demonstrate DET CRC technologies within a real-life and real-time exploration setting.

BACKGROUND AND AIMS

Regional Mineral System Drilling for Targeting and Testing builds on the previous DET CRC Project 3.4, as well as integrating key outcomes from other projects by utilising available technologies and methodologies for real-life and real-time deep exploration drilling. The project provides a unique opportunity to test technologies within a premier mineral terrane, known to host globally significant deposits, much of which is under-explored due to challenges of exploring through deep cover. The project will provide approaches to geological characterisation and vectoring that are fundamental to the application of technologies being developed within the DET CRC. The purpose of targeted data collection and the integration of multiple datasets within this project are to demonstrate the advantages to exploration workflows and lead to more efficient and effective exploration, thereby reducing costs to industry.

This Project aims to determine the appropriate drill spacing and sampling methods required to identify mineralising systems under cover at a scale 10 times larger than the target deposit.

SERVICE SECTOR ENGAGEMENT AND COMMERCIALISATION

The drilling (Boart Longyear), analytical service (Imdex) and government research (CSIRO) sectors will be engaged in the collection of data and in decisions affecting the interpretation of results gained from a regional drill program conducted in the Gawler Craton, SA. Pre-competitive datasets, 3D models, regional compilations of mappable exploration criteria and reports will be disseminated to the exploration community via Department of State Development's (DSD) on-line delivery service.

LINKAGES TO OTHER DET CRC PROJECTS

This project will provide an opportunity for testing technology developed within Project 2.2 and Project 3.2, and ideas for data integration within P2.3 through regional drill testing and data analysis within the Gawler Craton, SA.

YEAR 2 MILESTONES

- Complete DET CRC Mineral Systems Drilling program within the Gawler Craton and provide detailed report.
- Revise mineral characterisation and exploration strategies using data acquired during the Mineral Systems Drilling program and develop generic workflows applicable across the spectrum of IOCG-style deposits.
- Develop an exploration workflow that incorporates data driven decision making and advanced mineral system targeting in real-time and work with Project 3.2 to incorporate into Lab-at-Rig® workflow.
- Propose new prospectivity indices based on Mineral Systems Drilling program and investigation of deposit styles other than IOCG. Offer for commercialisation through DET CRC commercialisation process.

COMMONWEALTH AGREEMENT OUTPUT AND MILESTONES

- Undertake a drilling program to test our ability to vector towards IOCG mineralisation by drilling multiple holes with real-time data capture in a single drilling campaign (1 November 2015).