Central Gawler Craton Geoscience Workshop 2019

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Central Gawler Craton Geoscience Workshop 2019

Program outline

- Department and GSSA purpose
- Support to sector – current and new plans
- What’s in store for today?
- Where to next?
Accelerate exploration, **discovery** and information

Develop **innovative** infrastructure, services and research

Engage to build **industry** and **community** capacity

“....... and responsibly unlock the value and opportunities offered by South Australia’s mineral and energy resources.....”

“.....an open forum to discuss new geoscientific data, knowledge and future projects in this region....”
Support – commodity focus

Discover Gold in South Australia

Golden opportunities for discovery

Program

Mineral systems and exploration

Gold mines and projects

Maps and data

Gold properties and uses

Sector overview

Fossicking

Historical gold mines
MinEx CRC – program structure

**Program 1: Drilling Technologies**
- P1: Drilling Optimisation
- P2: Coiled Tubing Drilling for Definition of Mineral Deposits

**Program 2: Data from Drilling**
- P3: Real-time Downhole Assay
- P4: Petrophysical Logging While Drilling (LWD)
- P5: Seismic in the Drilling Workflow
- P6: Automated 3D Modelling

**Program 3: National Drilling Initiative**
- P7: Maximising the Value of Data and Drilling Through Cover
- P8: Geological Architecture and Evolution
- P9: Targeting Mineral Systems in Covered Terranes

**Mining/METS Companies**

**Geological Surveys**

**Education and Training Program**

**Opportunity Fund**
MinEx CRC – Fowler to Flinders region:

**Data mining project**

1. Support to industry through geoscience data
   - Delivery of key programs and new data
2. Extensive review of existing drill holes
   - Focus on what can be value added
3. Data to discovery
   - >700 drill holes to be reviewed (~300 completed)
   - New data added includes:
     - Downhole surveys
     - Lithology
     - Stratigraphy
     - Isotopic data
     - Petrology......
Support – Accelerated Discovery Initiative (ADI)

Provide co-funding opportunities to greenfields exploration activities to

• Exploration drilling frontier terrains or testing new concepts in other areas
• Geophysical programs
• Logistical support
• Identification and testing of new groundwater resources
• Collaborative technology and/or machine learning projects

• $3.3M over 3 years (total cost capped at $10M).

Register for updates on enegerymining.com.au/minerals/home
What’s in store for today?

Knowledge sharing and support leading to new major minerals discoveries

- Surface geology and geochemistry – new maps and projects with CSIRO
- Geophysical data acquisition – new interpretations and releases
- Basement geology – data perspective – the future is seamless
- Exploration practicalities – tenements in the Gawler
- Mineral systems – latest ideas GSSA / industry perspective

- Most important – open and honest discussions!!
What would make a difference?

• If you look back over the last 10-15 years at what’s been done in the region:

  • Have we shifted the dial on discoveries rates?
  • Are current mineralisation models the most applicable to the region?
  • What additional data sets are needed to assess the fertility of the region for a particular commodity?
  • What can we be doing with our data to unlock potential?
  • Can we refine anomalies to improve targeting?

Today we aim to provide new insights, information and generate future ideas and actions.......
Sli.do – Q&A
Central Gawler Craton Geoscience Workshop
#CGCGW19

Download via
Or go to https://www.sli.do
Thursday 28th November.

Key themes:

**New geoscience**
- latest findings on the evolution of South Australia’s incredible geology and geophysics.
- talks by leading academics on cutting edge geoscience related to mineral systems.

**Ancient and modern environments**
- A chance to review Geological understanding of ancient landscapes and geology of southern Australia

**Digital Earth**
- Machine learning and Artificial intelligence are an increasingly important part of modern geoscience.
- How these new tools to solving challenges in exploration and mining.
Monday – Tuesday 2\textsuperscript{nd}/3\textsuperscript{rd} December.

Key themes:
This workshop aims to discuss current understanding of these mineral systems, bringing together local and international examples.
Specific focus will include
- Alteration facies and their application to mapping the mineral system
- Lithospheric to deposit scale footprints
- Key deposit characteristics

Iron Oxide Copper Gold minerals systems workshop
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In closing:

1. More to discover....
   - *Exploration / discovery on the increase*

2. Support to industry through geoscience data
   - *Delivery of key programs and new data – MinEx, ADI...*

3. New commodity strategies
   - *Focus on discovery – Gold, Copper, Critical minerals*

4. Data to discovery
   - *Increase effective use of unconstrained data allowing industry to target and evaluate resource potential*
   - *Reducing risk associated with exploration and improving outcomes*
   - *SARIG and Tonsley Drill Core Library*