

The Geological Survey of South Australia

Full steam ahead!

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Director Geological Survey SA

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**GEOLOGICAL
SURVEY OF**
South Australia

DISCOVERY DAY



2025 Year of Delivery

- National Drilling Initiative (Northern Gawler Craton)
- Critical Minerals South Australia
- SARIG Catalogue
- South Australian Discovery Mapping Project
- SARIG Core Intelligence Procurement Process
- Warburton-Daralingie Shelf Prospectivity Study
- Magnetite Global Comparison study
- Otway Basin Core Report
- SA Geodata migration
- Otway & Poldas basins Acreage Release
- Northern Gawler Acreage Release
- Woomera Protected Area Prospectivity Report



DISCOVERY DAY

FULL STEAM AHEAD IN GEOSCIENCE



Drilling



Geochemistry



Geochronology



Future-proofing data



Regulatory advisory



Spectral scanning



New data entered in databases



Industry updates



Finding publications



New data entered in databases



Commodity based studies



Investment attraction and promotion

Industry updates

Finding new opportunities

Petroleum system studies

Timeline of Delivery: 2025



Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	Sep-Oct	Nov-Dec
<ul style="list-style-type: none"> ✓ NDI Drilling Program ✓ WPA Report Published ✓ Hylogger 4 installed & testing ✓ Hylogger 3 in production ✓ SARIG CI RFI Submitted to Tenders SA 	<ul style="list-style-type: none"> ✓ Hydrogen sampling ✓ NDI core scanning & analytical work commenced ✓ Curnamona Minewaste Study completed ✓ Polda Core oil staining identified 	<ul style="list-style-type: none"> ✓ Otway-Polda Acreage Released. ✓ SARIG CI documentation ready for EOI ✓ NDI Drilling program 3-day workshop held ✓ Curnamona Mine-waste report released 	<ul style="list-style-type: none"> ✓ SA Discovery Mapping launched! ✓ SADM Story Map made public ✓ Daralingie Shelf Warburton Basin Prospectivity review released to public ✓ AMIRA Magnetite Global Comparison Report released 	<ul style="list-style-type: none"> ✓ Otway Core Report released ✓ SA Geodata migration completed ✓ Airborne Electro-magnetic survey over Eyre Peninsula, planning commenced ✓ Hylogger commercial scanning start-up ✓ Curnamona Cu-Au systems and the Carrapateena IOCG deposit Report 	<ul style="list-style-type: none"> ✓ NDI drilling campaign final report completed ✓ NDI industry workshop ✓ Northern Gawler acreage release ✓ Discovery Day ✓ Energy Resources Summit
<ul style="list-style-type: none"> ✓ Extending the Warakurna Supersuite southern Aust. MESA Journal ✓ Kanmantoo Minewaste report ✓ Pyrite chemistry Stuart Shelf Report ✓ SA Titanium Report 	<ul style="list-style-type: none"> ✓ SARIG CI Competitive Dialogue started ✓ SARIG CI Thin Section scanning completed ✓ NDI Dashboard released to public ✓ SA Beryllium Report ✓ Tulukutangga –Field Trip Report 	<ul style="list-style-type: none"> ✓ Hylogger workshop ✓ Critical Minerals SA Project completed ✓ SARIG CI EOI released to tender ✓ SA Discovery Mapping UA ✓ Carbonatite Study commenced ✓ Hylogger lab modification ✓ Geochronology on the buried northern Gawler Craton. Part 1 Report 	<ul style="list-style-type: none"> ✓ Hylogger scanning Cooper-Eromanga core – oil & gas study ✓ SA Magnetite study expansion ✓ Basins and Ranges: a cross-section along the Delamerian-Lachlan deep crustal seismic line 22GA-DL1 MESA Journal ✓ Triassic Source Rock studies - Kiwi 	<ul style="list-style-type: none"> ✓ RAMAN study ✓ Otway-Polda Acreage Release closes ✓ SA Discovery Mapping expansion to Olympic Copper Domain ✓ SARIG CI preferred supplier identified and recommended ✓ Analysis of HyLogger-3 data Musgrave Province Report ✓ Drillholes report: Paleovalley mapping in the northwestern Gawler Report 	<ul style="list-style-type: none"> ✓ 2021 State Magnetic Grid Merge ✓ 2025 State Radiometric Grid Merge ✓ Seismic stratigraphy of the Cambrian Eastern Warburton Basin, South Australia Report ✓ Radiometric & TMI State Grids

Quiet Achievers!

- ◆ 60% of the GSSA team are working behind the scenes.
- ◆ Collect, curate, QA/QC the state's geoscientific data
- ◆ Keep the databases up to date and working
- ◆ They're out in the field, mapping, helping industry, training geologists and offering expert advice
- ◆ Scanning core and cuttings for our projects and for industry
- ◆ Collecting new analytical data
- ◆ Manage, store, record the state's core, cuttings and samples & get them out and back in for our stakeholders
- ◆ Provide expert customer service
- ◆ They provide QA/QC service to assure that submitted industry data is complete and compliant with our legislation
- ◆ Maps, dashboards, storyboards and keeping our systems and software tools up to date.
- ◆ **They are our great innovators.. Continuously improving in how we deliver our precompetitive geoscience.**

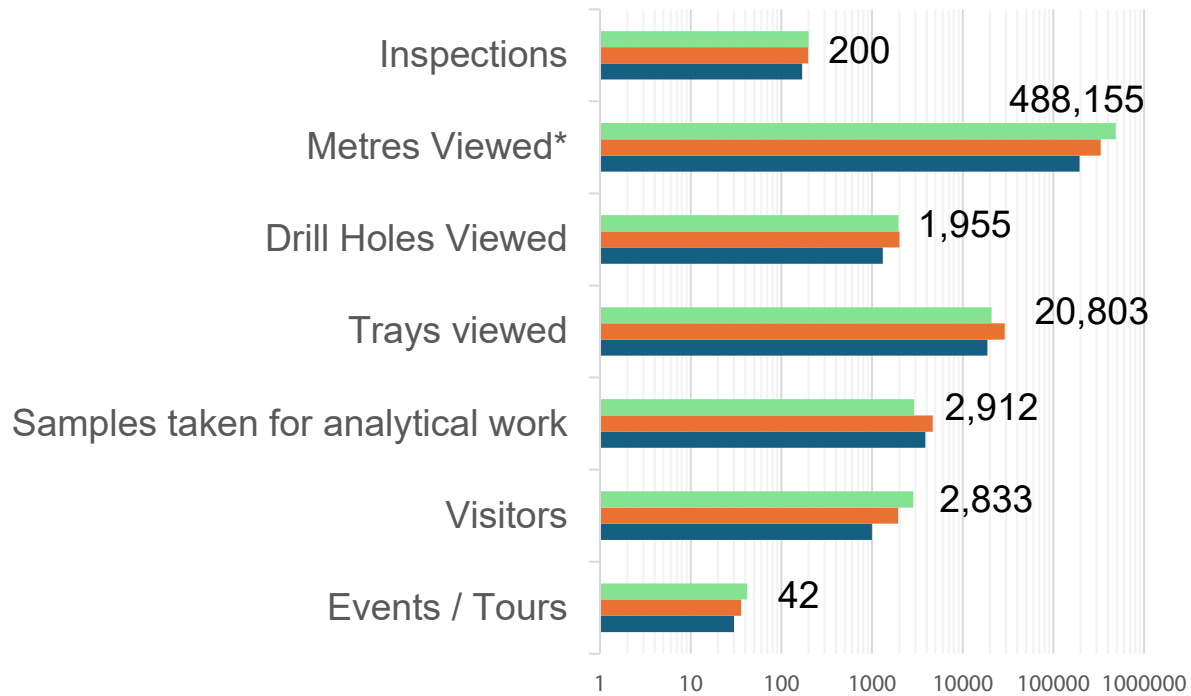


SA Drill Core Library



SA Drill Core Library Activities

■ 2025 ■ 2024 ■ 2023



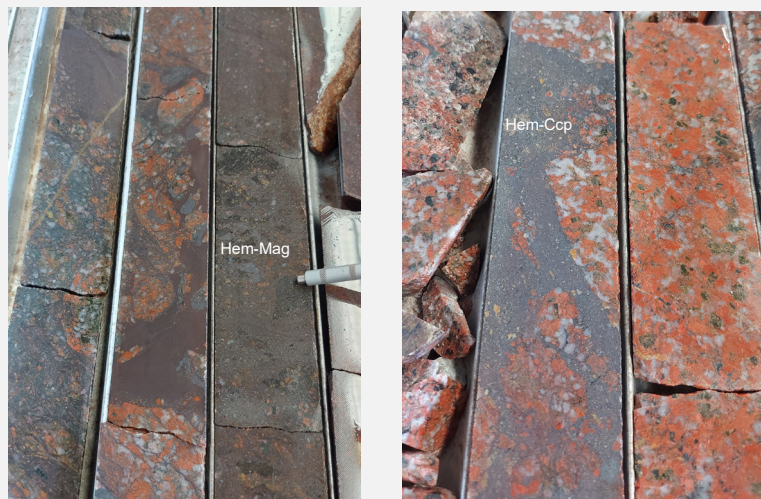
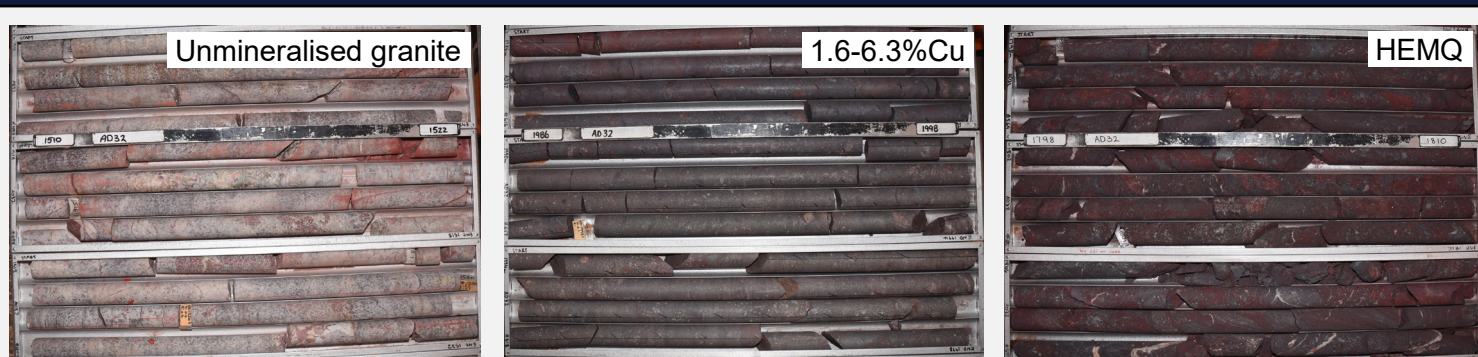
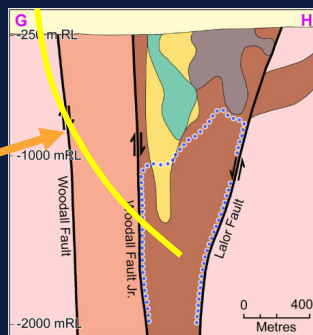
GSSA
DISCOVERY DAY

New core submissions



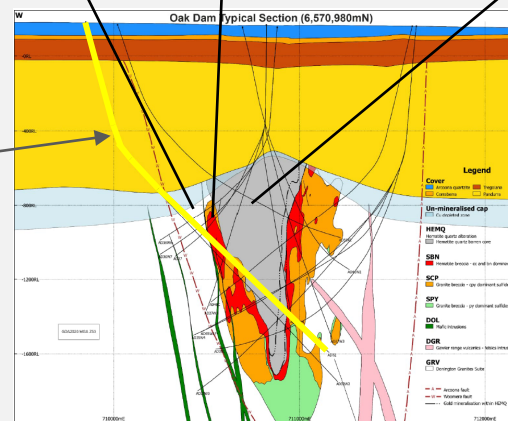
- Olympic Dam Deeps (Cu-Au)
- Hillside (Cu-Au)
- Oak Dam (Cu-Au)
- Challenger (Au)
- Arcoona (Cu-Au)
- Sahara & Mystic (Ni)

Approximate Dh trace of RD4608



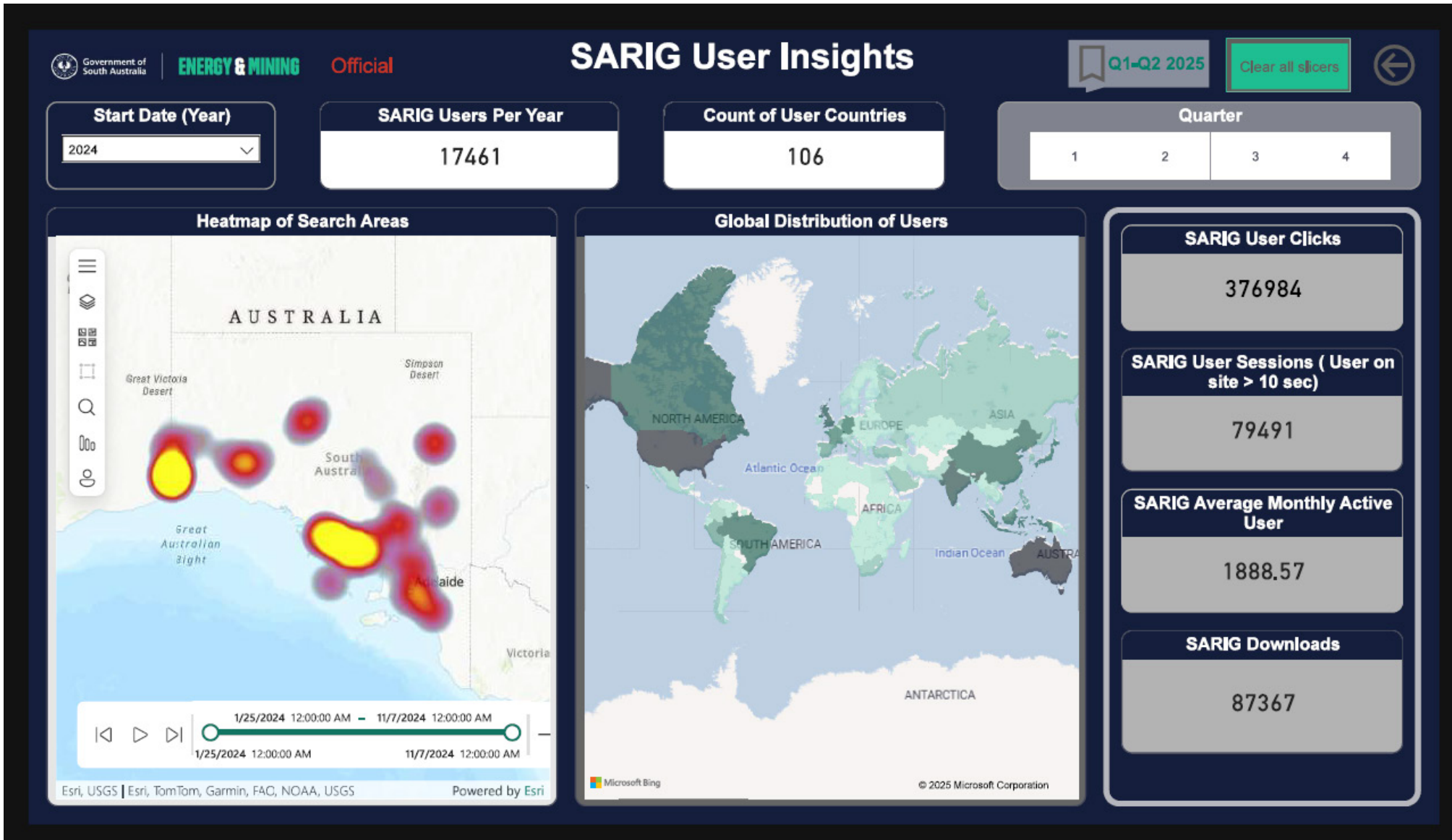
Chalcopyrite-pyrite-hematite veins through granite

Approximate Dh trace of AD32



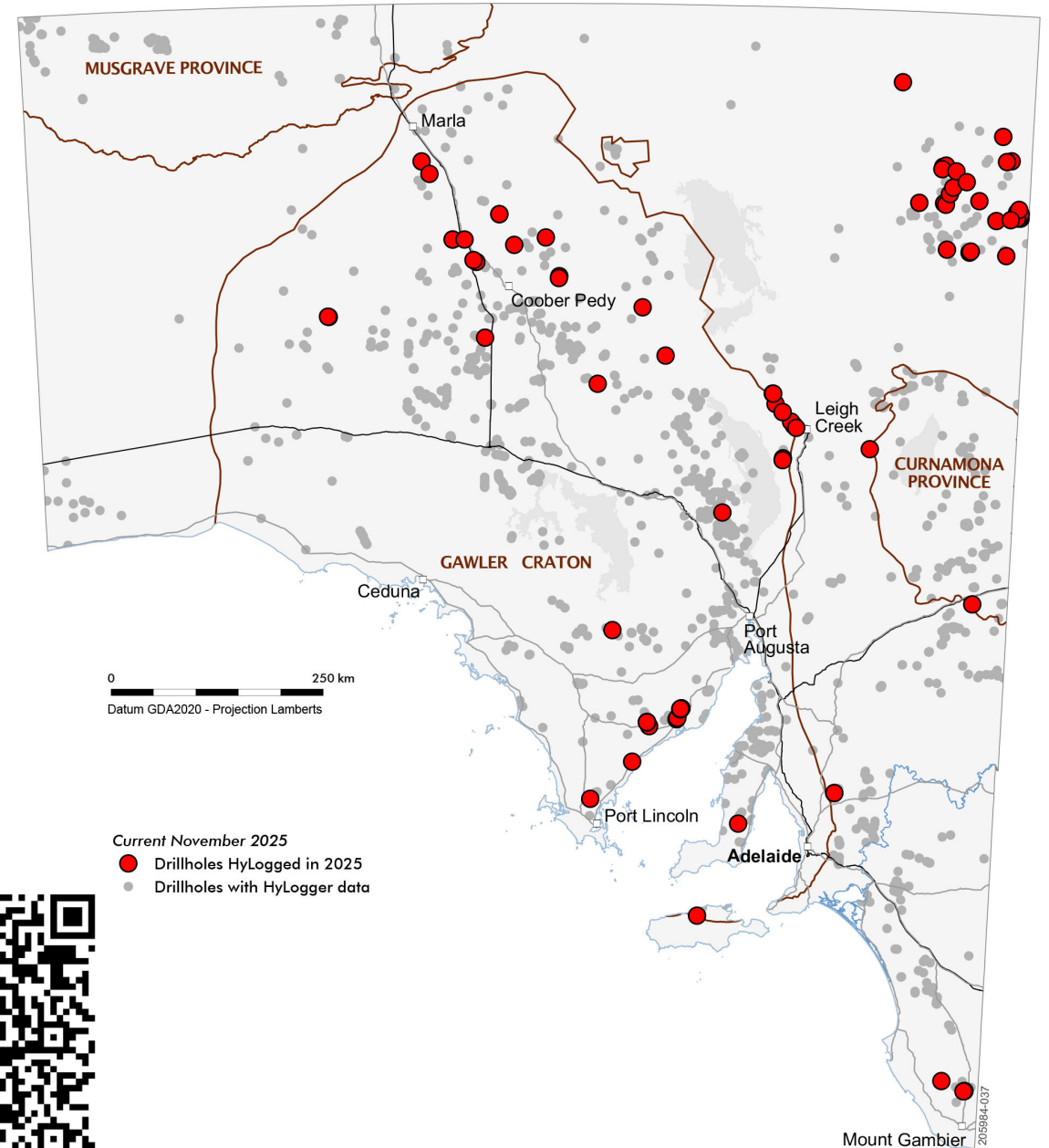
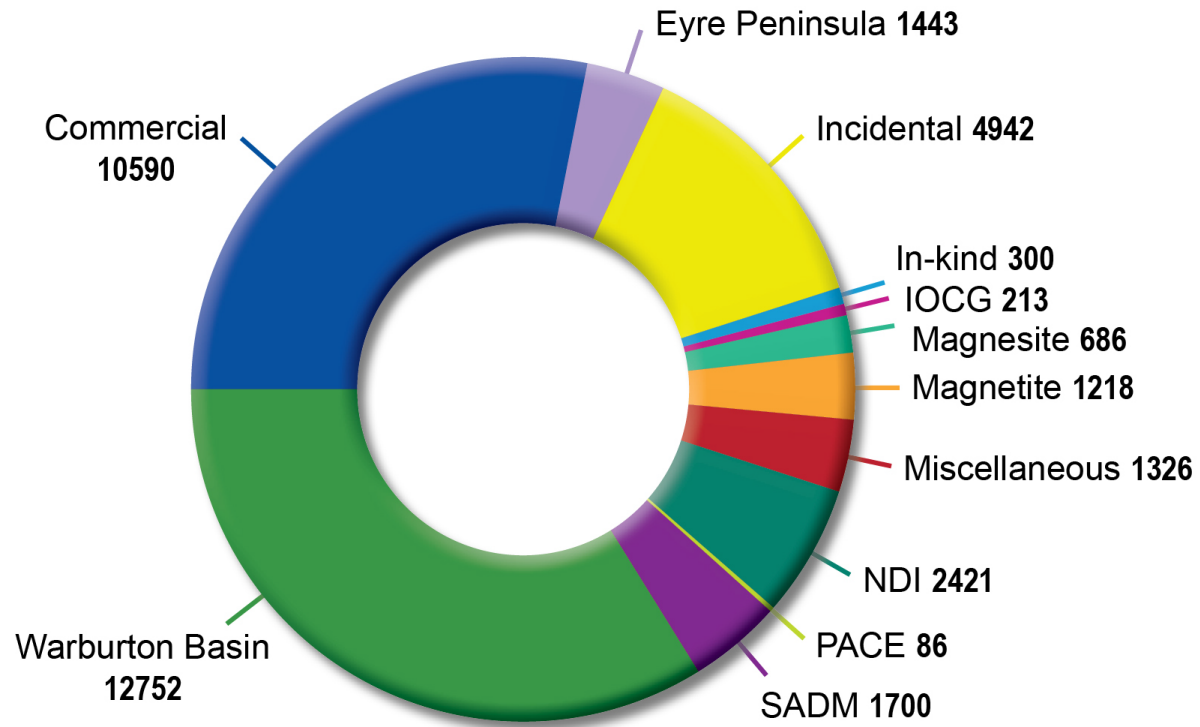
*Geological sections from BHP.com

Precompetitive Geoscience Data & Customer Services



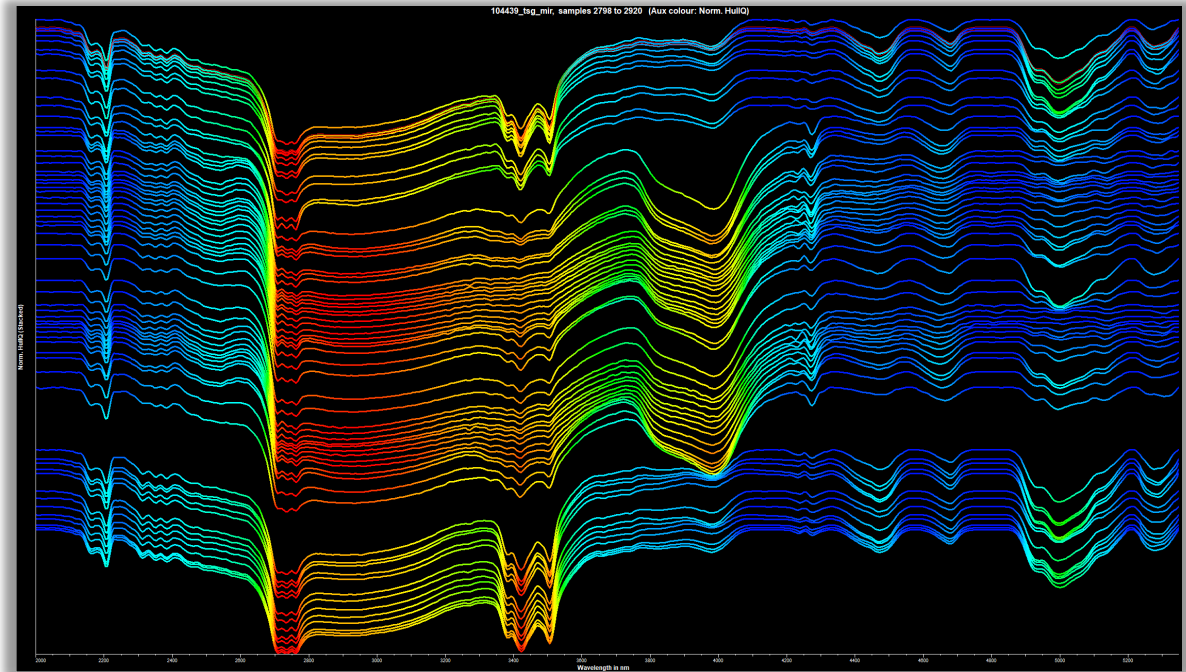
2025 Review

2025 Production: 37,677 m



2026: HyLogger-4 Transition

- Continuing engineering improvements – ready for production February 2026
- Scanning new legacy drill holes donated to Core Library:
 - Olympic Dam
 - Oak Dam West
 - Hillside
- Network connectivity and data management solutions ongoing with PIRSA
 - Including architecture for delivery of high-resolution imagery
- HyLogger-3 production continuing during 2026
- Provision of commercial services to industry and academia, using the Hylogger-3



Ulandi 3 Mid Infrared data



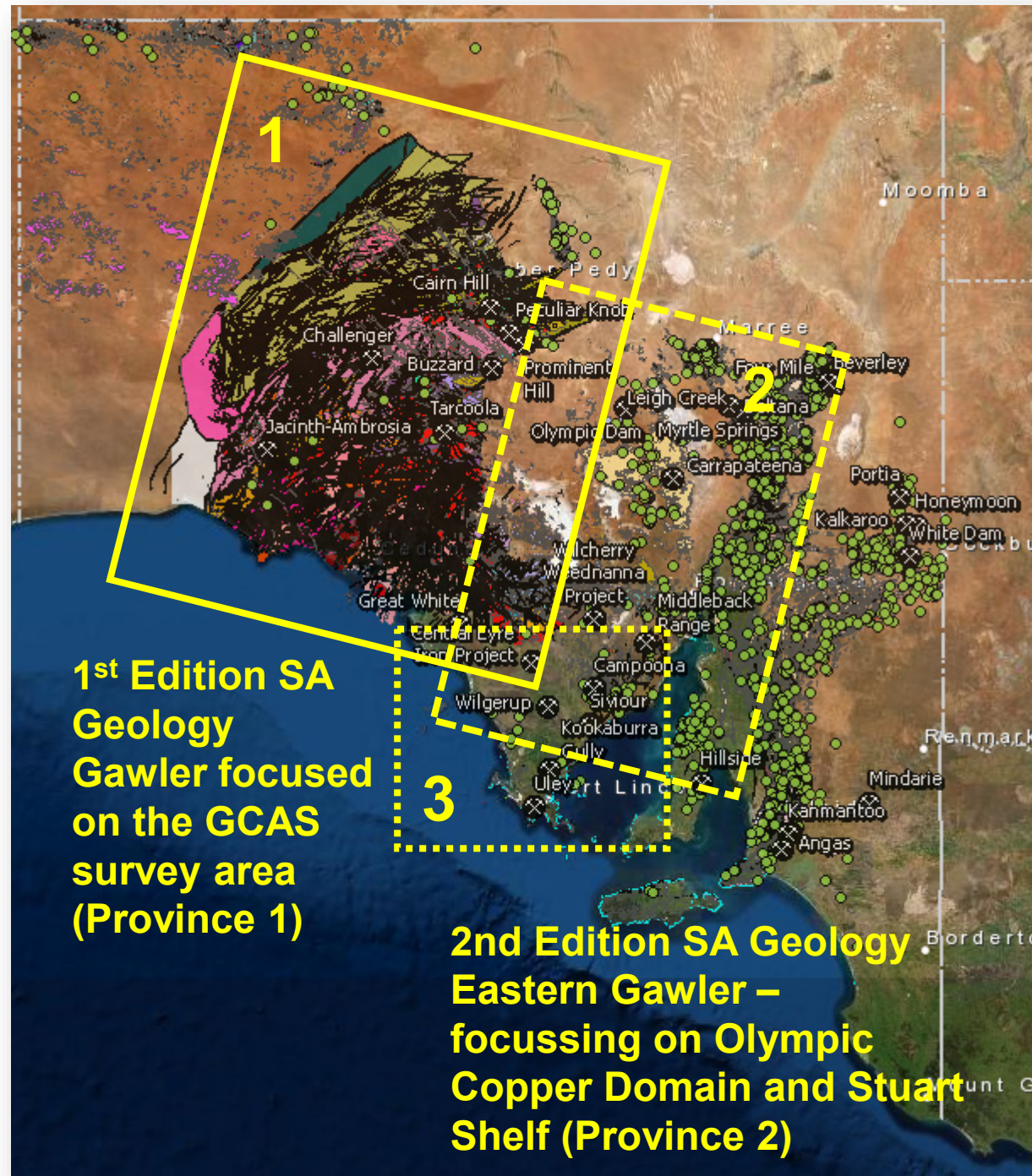
SADM Story Map & What's Next!

SARIG map | Main Menu | SARIG catalogue

[New Releases](#) |
 [Mineral Resources](#) |
 [Energy Resources](#) |
 [Renewable Energy & Storage](#) |
 [Land & Water Management](#) |
 [Infrastructure](#)

[SA Geology 1st Edition](#) |
 [Dowry and Poole Basin Acquire Releases 2025](#) |
 [Hygger data releases - last three months](#) |
 [Delamerian National Drilling Initiative \(NDI\)](#) |
 [Hydrogen and Renewable Energy Act](#) |
 [2024 regional gravity grids and data](#) |
 [2024 Statewide radiometrics](#) |
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Energy Resources: What's next?

Successful applicants for all blocks offered this year will be notified early in the new year.

Natural Hydrogen exploration is full steam ahead with the drilling out on the Yorke Peninsula by Gold Hydrogen.

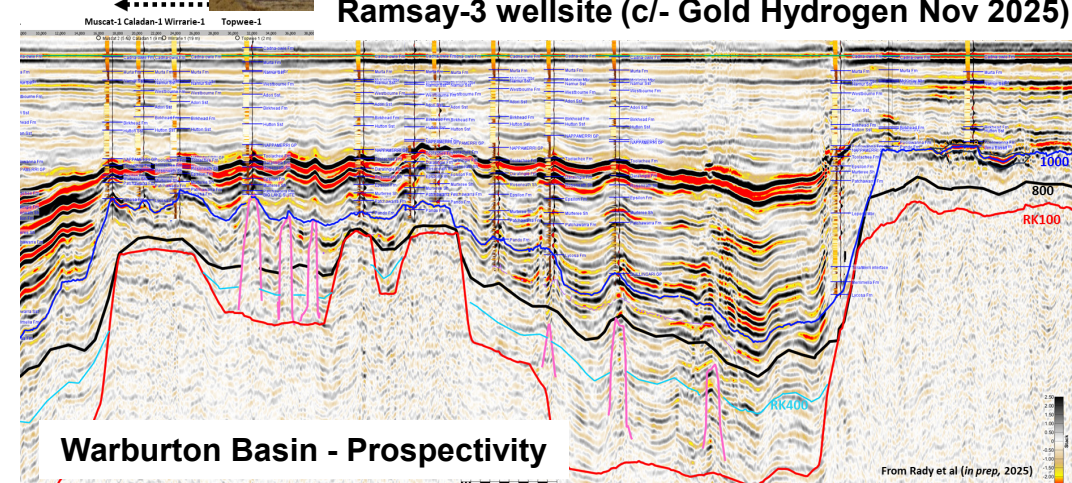
Integrating our onshore geological models with the offshore Otway Basin has strategic value.

Encourage further exploration of the Warburton play beneath the Cooper Basin.

Watch this space for more acreage releases in the Cooper and Otway basins!



Ramsay-3 wellsite (c/- Gold Hydrogen Nov 2025)



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SA Geodata
Standardisation

Onsite Core
Digitisation

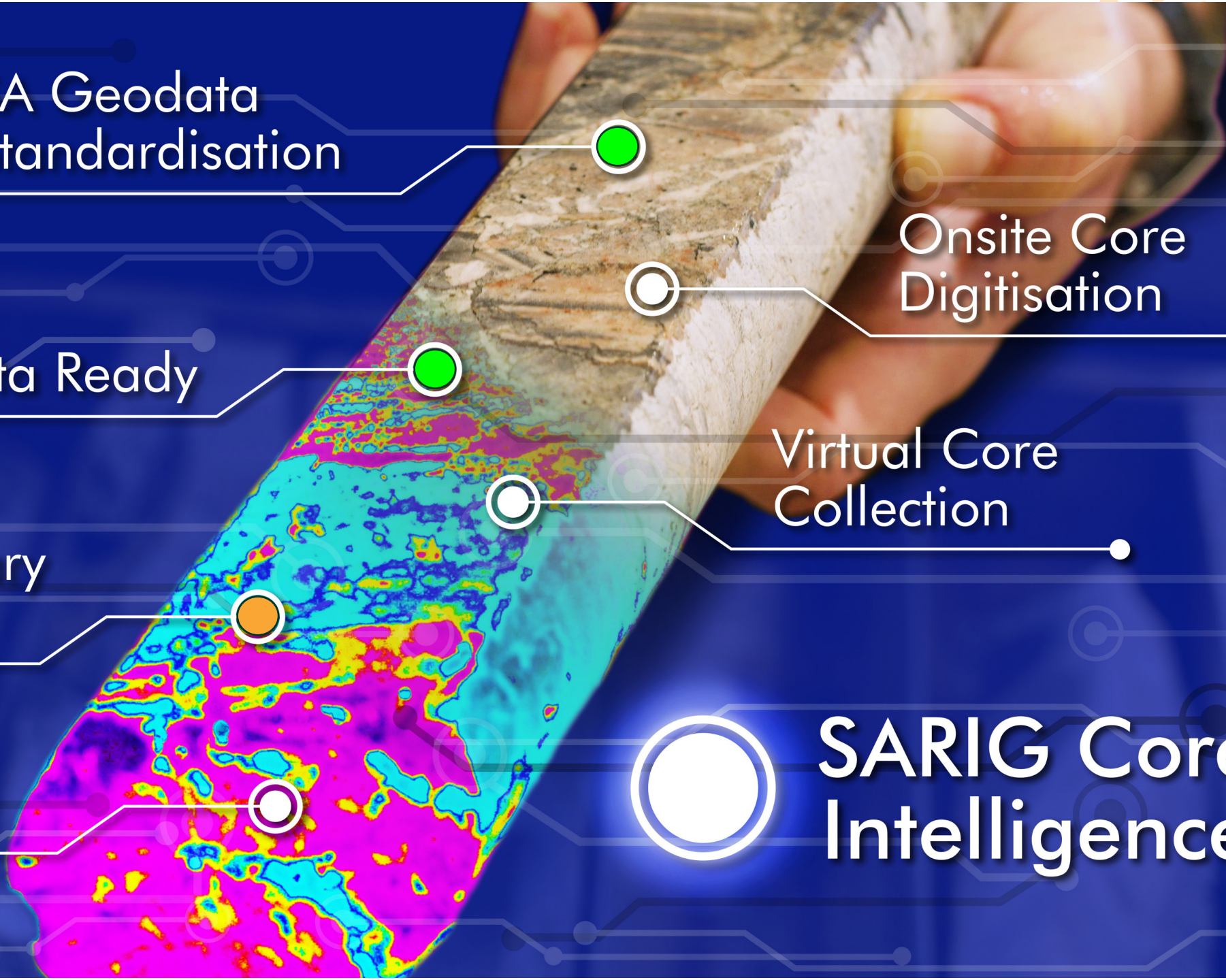
SA Geodata Ready

Virtual Core
Collection

SA Core Library
Digitisation

**SARIG Core
Intelligence**

Future Data



Thanks for listening

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