

AUSTRALIA MINERALS

REALISE THE OPPORTUNITY

South Australia: Geoscience Data Delivery

Delivering future tools to enable data-driven exploration and discovery

Christie Gerrard
Department for Energy and Mining



South Australia – embracing technology to drive innovation

- on track to 100% Renewable Energy
- becoming a green hydrogen superpower
- the rising force in Critical Minerals
- world-class mineral resources, hosting 69% of Australia's copper resources, 82% of Australia's uranium resources, 26% of Australia's gold resources, and 76% of Australia's graphite reserves.

South Australia's economy is ranked number one in the nation, according to the latest CommSec State of the States. *Jan 2024, State and Territory Economic Performance Report.*

AUSTRALIA  MINERALS | SOUTH AUSTRALIA



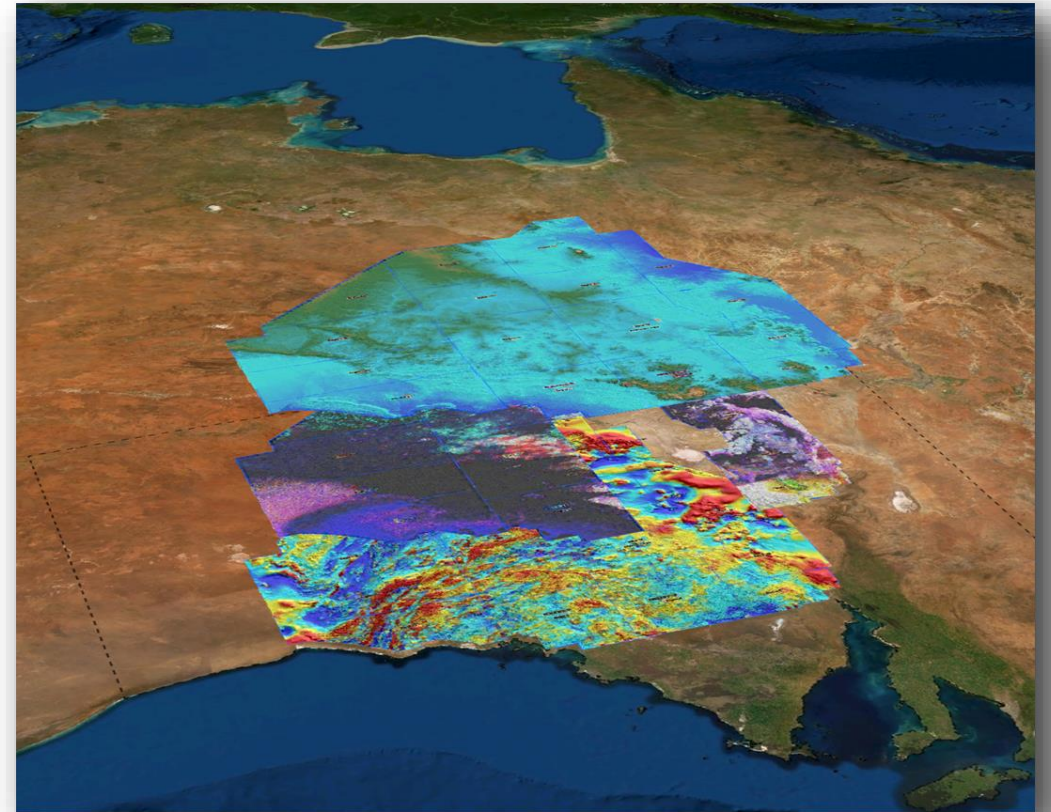
Adelaide Drone Pano Torrens

Google Earth

South Australia – Geological Survey of South Australia

Support mineral exploration by delivering geoscience data and knowledge.

- Global data challenge competition: Explore SA
- Digital Strategy: Digital to the Core
 - Discovery Mapping project
 - Data Acquisition and Legacy Data programs.
 - Geochemistry Delivery
 - Delivery – SARIG Map, Catalogue, Explore and Core



Geological Survey of South Australia – Digital Strategy 2021 - 2025

GSSA strategy for unlocking the value of geoscience data and enable modern data-driven exploration.

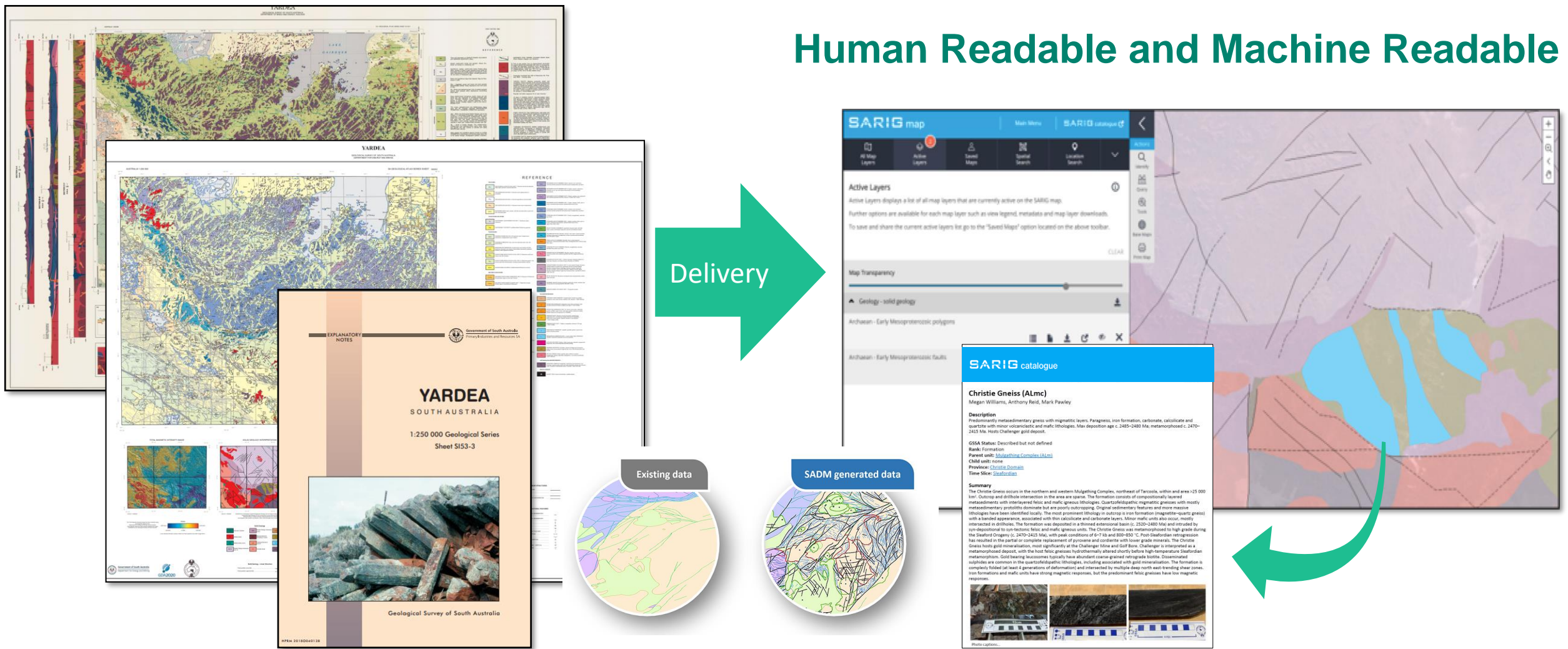
- Build our strength in digital governance and skills in emerging technologies.
- Expand the digital footprint of South Australian geoscience information to unlock mineral resources.
- Improve access to accurate, up-to-date geoscience data for exploration drilling decision making.
- Enhance government open API endpoints making geoscience data findable, accessible, interoperable and reusable (FAIR data principles).



<https://www.energymining.sa.gov.au/industry/geological-survey/digital-strategy>

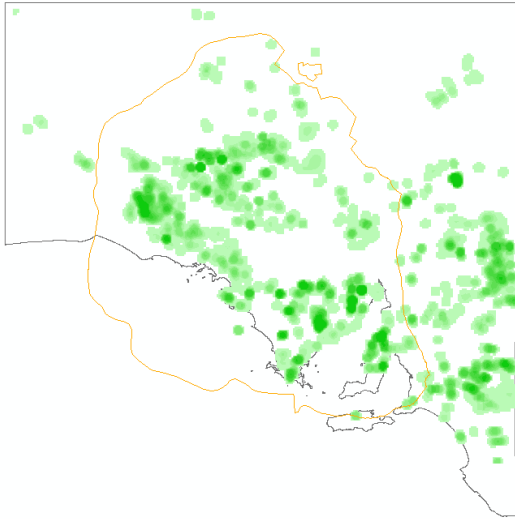
Geological Survey of South Australia – Discovery mapping project

Human Readable and Machine Readable

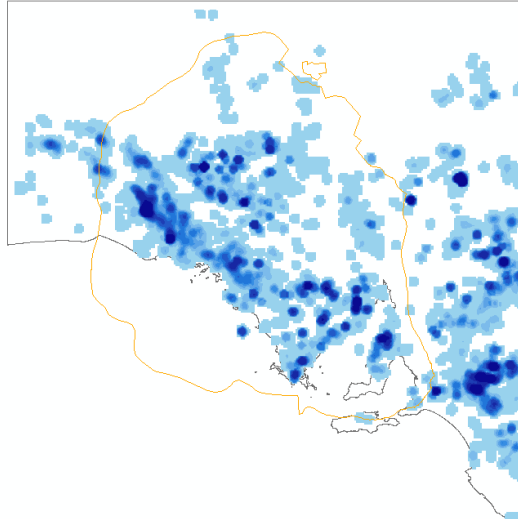


Geological Survey of South Australia – Legacy data programs

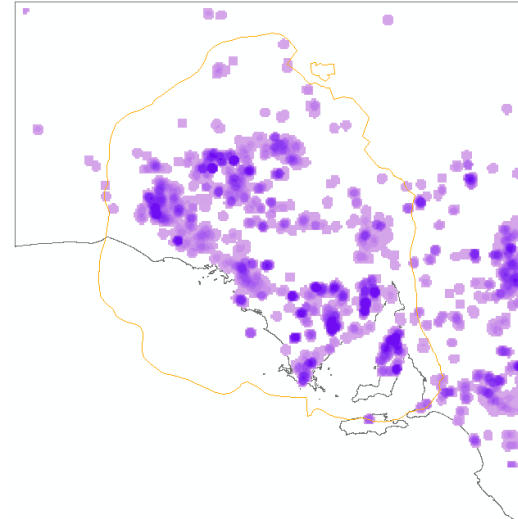
Drillholes



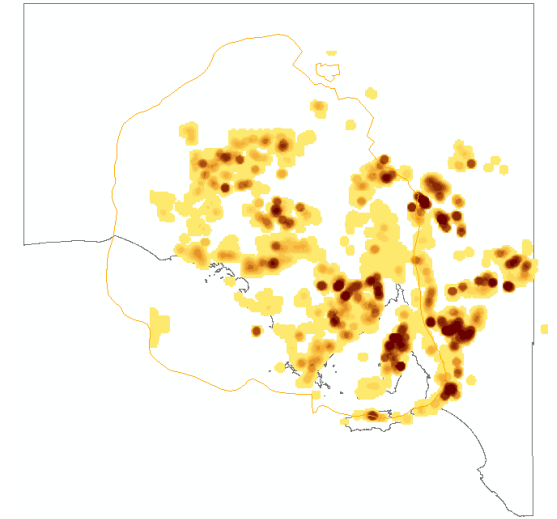
DH Lithology



DH Geochemistry



Surface Geochemistry



Over 1000 km of logged core, estimated value of data made accessible

\$350 million

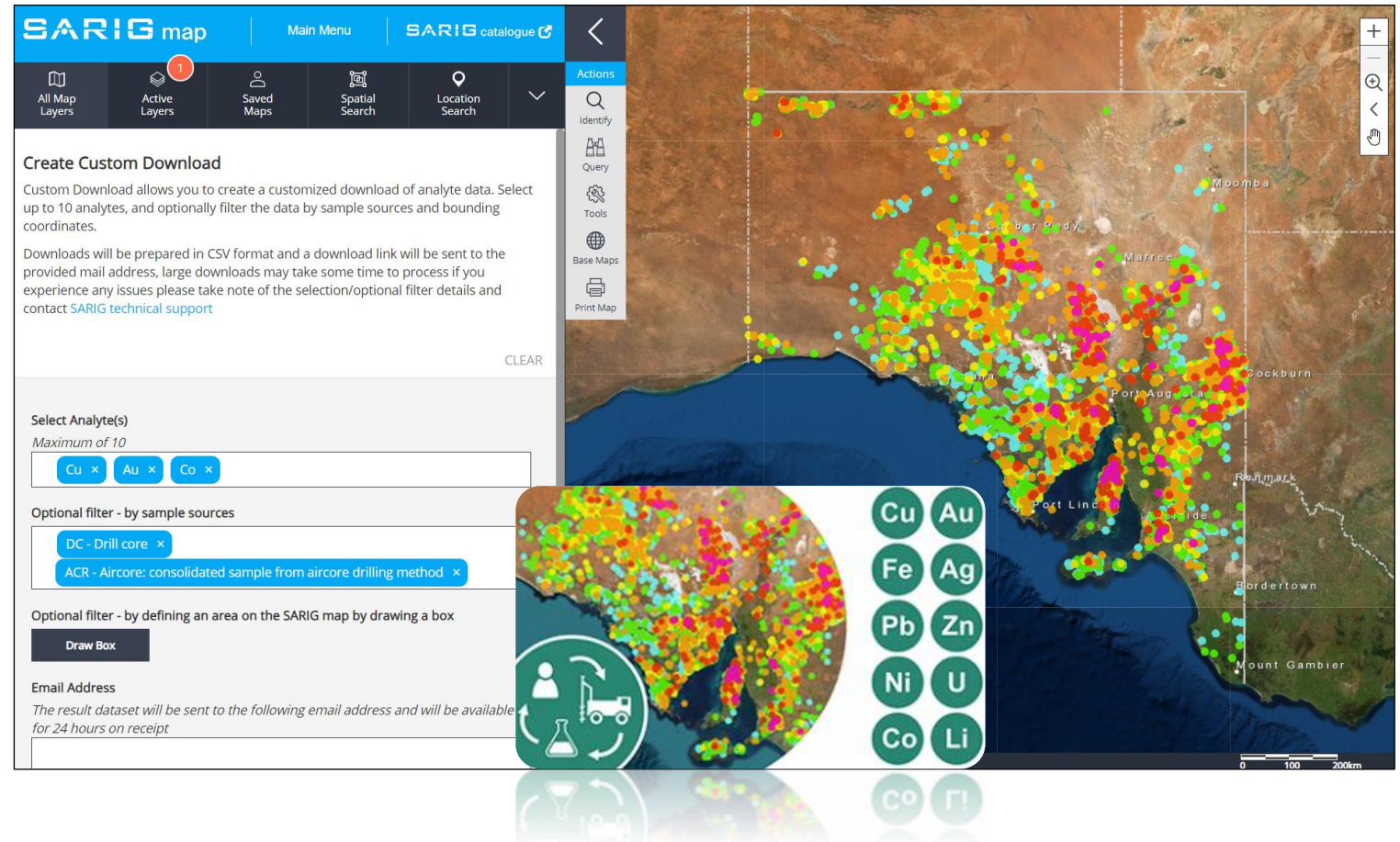
Geological Survey of South Australia – Geochemistry data delivery

Custom downloads

- Seamless access to government and open file mineral company drilling geochemistry.
- Data cleansing and standard units (ppm), removal of string values and wide file format delivery.

Maximum downhole geochemistry

- Suite of commodities
- Symbolised by normalised times average crustal abundance value
- Dataset includes drillhole location, analysis method, original assay.



Geological Survey of South Australia

SARIG – South Australian Resources Information Gateway



Vision

Delivering pre-competitive geoscience and innovated data tools that enable data-driven exploration and discovery.

Strategy

Evolve SARIG's profile into a suite of digital service platforms:

SARIG map | SARIG explore | SARIG catalogue | SARIG core

Approach

RIDE – Revive, Improve, Deliver, Evolve



South Australian Resources Information Gateway

Globally No 1. Geological Databases, Fraser Institute, Annual Survey of Mining Companies, 2022



**The best geological
database I have ever
interacted with.**

**Interface is very
intuitive, user-friendly
and with fantastic
visuals.**

Mineral Exploration Geologist
UK Geoscience Company



**The data has 100%
regional coverage,
exceptional quality,
up-to-date, and
available in a variety of
formats.**

Mineral Exploration Geologist
UK Geoscience Company

Global Recognition

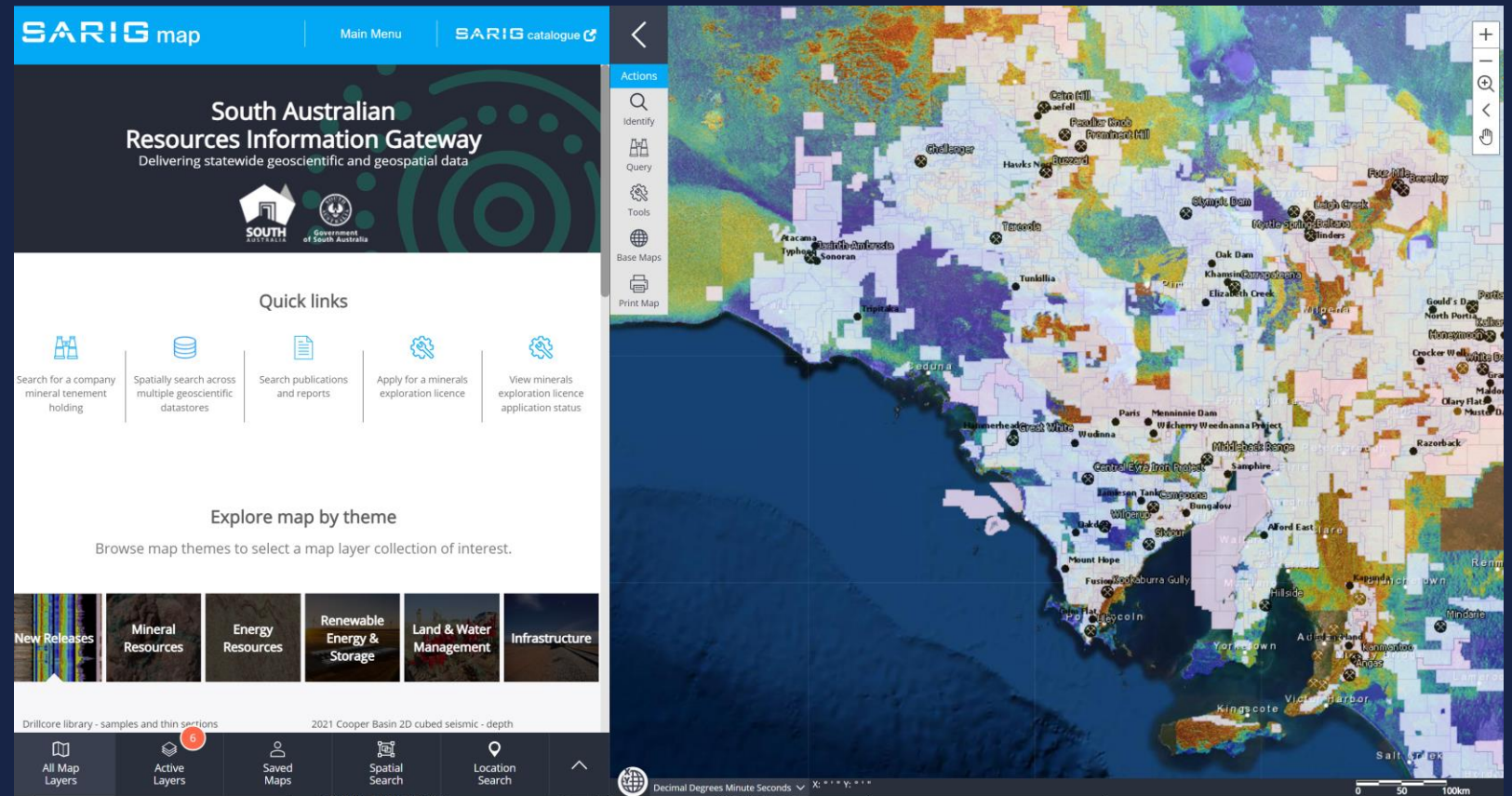
SARIG

South Australian Resources Information Gateway



SARIG map

Delivering
geological,
geospatial data
and GIS tools



South Australian Resources Information Gateway



**Visualise,
interrogate to gain
data-driven
insights**



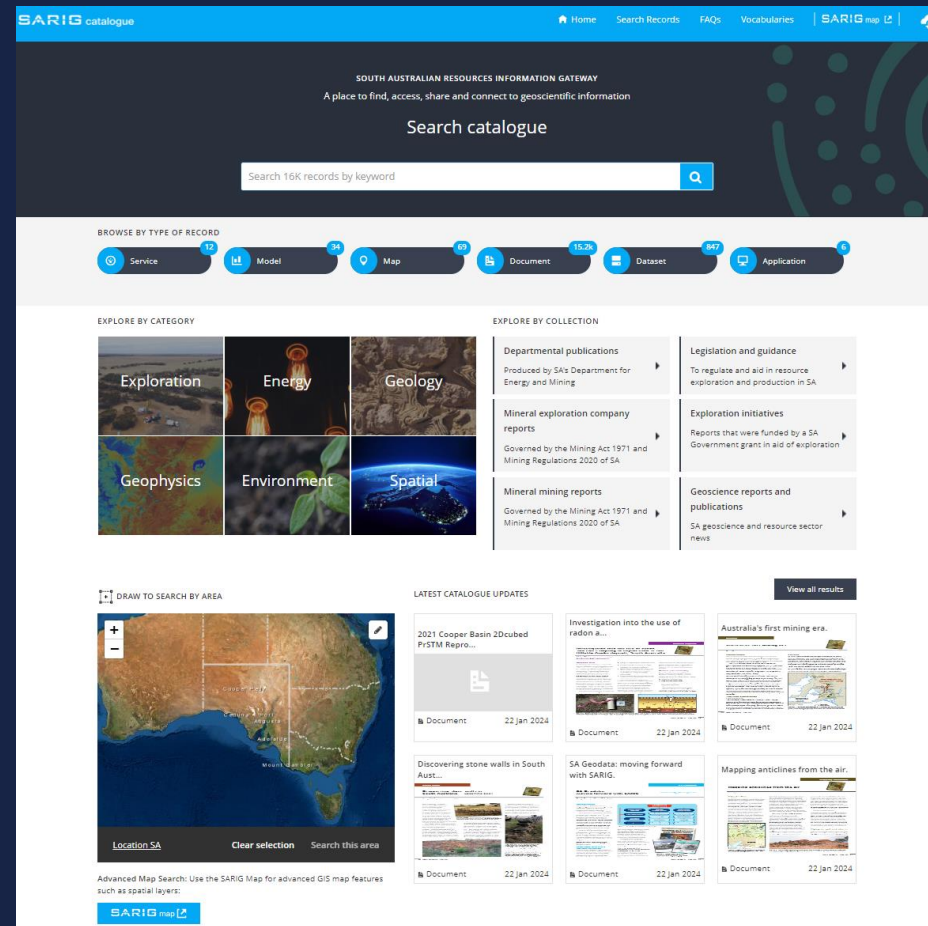


South Australian Resources Information Gateway



SARIG catalogue

Connect to
geoscience data
packages, 3D models
and publication APIs



- Search across all geoscience data, maps and publications
- Cloud to Cloud delivery for high volume transfer of geoscience data
- International Standard metadata and catalogue API (full catalogue is machine readable)
- South Australian vocabulary service

DELIVERY Q2 2024

SARIG

South Australian Resources Information Gateway



SARIG map

Delivering
geological,
geospatial data
and GIS tools

REVIVE



SARIG explore

Visualise,
interrogate to gain
data-driven
insights

IMPROVE



SARIG catalogue

Connect to
geoscience data
packages, 3D models
and publication APIs

DELIVER



SARIG core

Digital access and
visual intelligence to
SA's physical
geoscience footprint

EVOLVE

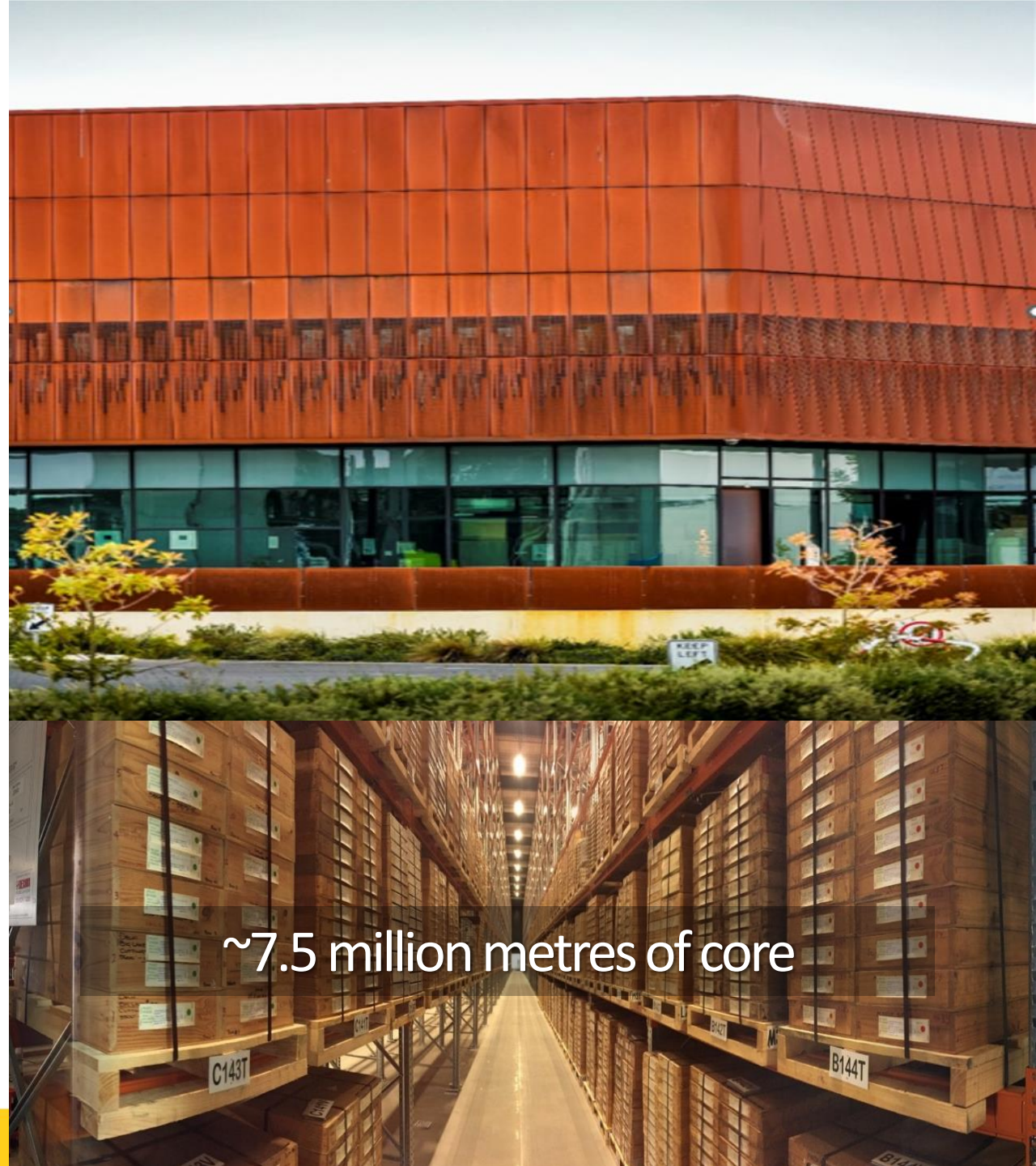
Delivering pre-competitive geoscience and innovated data tools that enable data-driven exploration and discovery

South Australia – next steps..

- Next generation digital geoscience, we're open to collaborations and partnerships to test, grow, communicate South Australia's digital geoscience potential.
- Interoperability takes time to be successful.
- SARIG Map | Explore | Catalogue | Core – delivering accurate, up-to-date and ease of access to information for data-driven decisions.
- Unlock the core library to create new digital assets and insights.

We are open for business

AUSTRALIA  MINERALS | SOUTH AUSTRALIA



~7.5 million metres of core

AUSTRALIA MINERALS

REALISE THE OPPORTUNITY

Thank you



- Contact the South Australian team:
 - DEM.CustomerServices@sa.gov.au
 - energymining.sa.gov.au

