2019 SA Exploration & Mining Review

South Australian Exploration and Mining Conference
Alex Blood
Adelaide Convention Centre
Friday, 29 November 2019
Acknowledgement of country

We acknowledge this land that we meet on today is the traditional lands for Kaurna people and that we respect their spiritual relationship with their country. We also acknowledge the Kaurna people as the custodians of the Adelaide region and that their cultural and heritage beliefs are still as important to the living Kaurna people today.
Resource growth opportunities

• Mining (Mineral Resources) Act passes Parliament
• Energy and Mining Consultation Paper
• Copper and Magnetite Strategies
• Hydrogen Action Plan
• Accelerated Discovery Initiative
• Explore SA: the Gawler Craton Challenge
• Discover Gold
• MinEx CRC and National Drilling Initiative
• Critical Mineral response
Second year of increased exploration expenditure

Mineral exploration expenditure - $85 million in 2018/19 - Highest in four years - 47% of expenditure searching for copper
Emerging Cu-plays – not only IOCG

- Northern Adelaide Rift Complex, Peak and Denison Range
- Exploration models:
  - Sedimentary-hosted Cu model
  - Paterson/Telfer Cu
  - Cloncurry / IOCG
- Active companies:
  - First Quantum
  - Rio Tinto
  - Renascor
  - Cerberus (Ernst Kohler)
  - Minotaur
  - Copper Search (Macallum Group)
Expanding copper resources

What is the Transformation Energy Hub

Why is it important?

What energy technologies will the hub host?

What does the Hub offer?

Contact

ASX Release

12 November 2019

Significant growth in Carrapateena Resources; Prominent Hill mine life extended to 2031

- Carrapateena Mineral Resources exceed 5Mt of contained copper
  - Copper metal tonnes increase by ~34% and Mineral Resources increase by ~65% to almost 1 billion tonnes based on future block cave potential of entire Resource
  - Ore Reserve tonnes increased with optimisation of the sub-level cave footprint to improve production ramp up and caveability
- Prominent Hill underground mine life extended by a further year to 2031
  - Underground Ore Reserve of 39Mt @ 1.6% copper equivalent with Proved Reserves increasing to 77%
Oak Dam West discovery
IOCG mineralisation
Announced by BHP, Nov 2018
425m @ 3% copper, 0.59 g/t gold + U + Ag
Inc. 180m @ 6% copper, 0.92 g/t gold
Encouraging second-phase results - significant widths of copper, including copper grade zones over 4%, announced BHP, Oct 2019
Highlights from our west

Near-Surface, Flat-Lying Ore Body
Sivour’s low operating cost is due in large part to shallow, horizontal orientation of a single massive ore body that offers comparatively low mining costs.

This orientation facilitates a single shallow mining design that can be mined via conventional open pit mining methods.

Successful shift to Ambrosia operations heavy mineral sands– Iluka Resources, Far west
Accelerated Discovery Initiative

SOUTH AUSTRALIA naturally rich with opportunity

Transform greenfield exploration together

South Australia’s new Accelerated Discovery Initiative brings fresh thinking to greenfield exploration.

$10 Million over 3 years

Collaborative grants for:

- Finding and testing new supplies of ground water.
- Single and multiple drilling programs in frontier terrains.
- Logistical support in remote greenfield areas.
- Bringing collaborative innovation and novel technologies to generate new exploration ideas.
- Geophysical programs and testing new concepts.

Encouraging Aboriginal employment during exploration.

VISIT www.energymining.sa.gov.au

IOCG Systems of South Australia

Improving prediction

- Prospectivity model.
- Incorporates MT, basement geology, structure and potential fields.
- Highlights major IOCG deposits as well as underexplored regions.
- Available for download from SARIG.

MESA J 90 - Wise, 2019
Gawler Craton Airborne Survey: to the moon and back, twice!

- Acquisition **100% completed**
- World’s single largest contiguous airborne Total Magnetic Intensity survey
- Next generation airborne magnetic and radiometric coverage for South Australia 200m line spacing, 60 m ground clearance
- Processing status: 13 of 16 blocks completed.
- Value-add products & collaboration to determine optimum magnetic source solutions for depth to crystalline basement
Leadership in Magneto-Tellurics

Electrical resistivity at a depth of 30 km, derived from AusLAMP MT
ExploreSA: the Gawler Challenge

- Explore the Gawler: Global crowd geoscience competition
- Opens in 2020: TBA
- DEM – Unearthed partnership
- Brings together global innovators, data scientists & geoscientists
- Do new things with the wealth of open data
- Generate new models and new exploration ideas
- Published outputs
MinEx CRC & National Discovery Drilling

- MinEx CRC is world’s largest mineral collaboration in Australia.
- Geological Survey of South Australia is a major participant in one of its flagship programs - the National Drilling Initiative.
- First focus area is Delamerian Orogen on Eastern side of State.
- Lies at continental margin 600 million years ago.
- Underexplored, yet hosts demonstrated mineral occurrences.
- Prospective for gold, copper, silver, nickel, platinum group elements, lead zinc, molybdenum, tin and more.
- Geological Survey has partitioned 80,000 hectares to undertake intensive geological review to inform selection of drilling sites.
- Project will develop suite of new precompetitive geoscience data to stimulate discovery.
POWERFUL EXPLORATION TOOLS

New models for more accurate targeting
Predictive analysis
Time-Space diagrams
Map data and spatial analytical tools
Data packages and exploration toolkits
Contemporary methods
Workshops with gold experts

WHY SOUTH AUSTRALIA IS THE PLACE TO DISCOVER GOLD

Courtesy Havilah Resources
Poised for a new era

Opportunity to leverage renewable and high-tech minerals
Resources sector

Excellence in Working with Communities

Winner: EMZ DPM and Health Directions for their program “Time for Wellbeing: Community Health Partnership”.

Commendation: ELMCO Mining for their program “Innovation in dust source identification and monitoring”.

Excellence in Innovation: Productivity Improvement

Winner: C2 Minerals and Unearthed for their “C2 Minerals Extractor Challenge”.

Commendation: Barrie Energy for their “Windmill Waterfront mining program”.

Excellence in Innovation: Environmental Management

Winner: Adelaide Brighton Cement for their “Adelaide Brighton Cement Restored-derived Fuel Program”.

Excellence in Innovation: Health and Safety

Winner: Santos for their “Live of Fire Campaign”.

Commendation: SIRF and Acid Recovery for their program “ULID RECOVERY”.

Winner: EM 2019 Premier’s A. for their “Underground Mining: School of Excellence”.

2019 YOUNG ACHIEVER

The inaugural winner of the Young Achiever award at the Premier’s Awards in Energy and Mining was Daniel Ennis, Managing Director of Orica Consulting Australia. Watch the video to hear more about his amazing achievements.

DOWNLOAD THE PHOTOS

All of the professional photographs taken at the Awards are available for you to download.

When sharing on social media, please remember to use the event hashtag, #PremAwards.

READY FOR 2020?

The planning for the 2020 Premier’s Awards in Energy and Mining is well underway. The organising team is developing opportunities for you to be involved in 2020 through sponsorship and partnership with the Awards.
Disclaimer

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