

South Australia's Copper Scorecard



Copper Strategy Achievements to June 2018

The Government of South Australia supports industry to leverage the value of the State's rich copper resources.

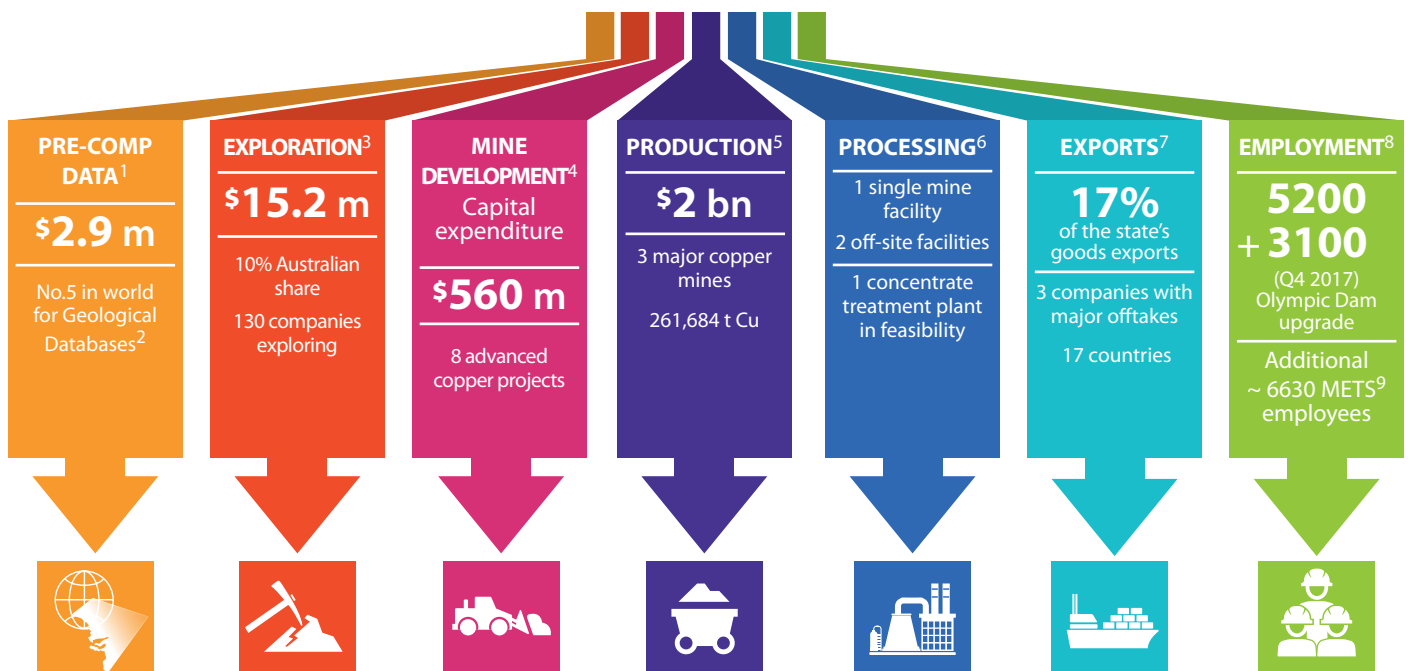
Investment in the State's copper mines was led by infrastructure upgrades, Southern Mine Area expansion at Olympic Dam and construction of the Carrapateena copper-gold mine. These projects contributed to increased capital expenditure of \$560 million for the year.

Copper prices have rebounded to a four year high, positively impacting on production value, which increased to \$2 billion in 2017, despite lower volumes than the previous year.

Direct employment in the State's copper industry remained around 5200, and job numbers were boosted by an additional 3100 people, temporarily employed in the second half of the year to work on infrastructure upgrades at Olympic Dam.

South Australia's share of national copper exploration expenditure has decreased and remains a challenge, as the copper inventory required to meet the goal of 1 Mtpa must come from new copper discoveries. Production increases for Olympic Dam and Carrapateena will continue to ensure that South Australia maintains its reputation as a global copper mining jurisdiction, exporting copper to the world to meet the increasing demand for 'green' energy minerals for a low carbon future.

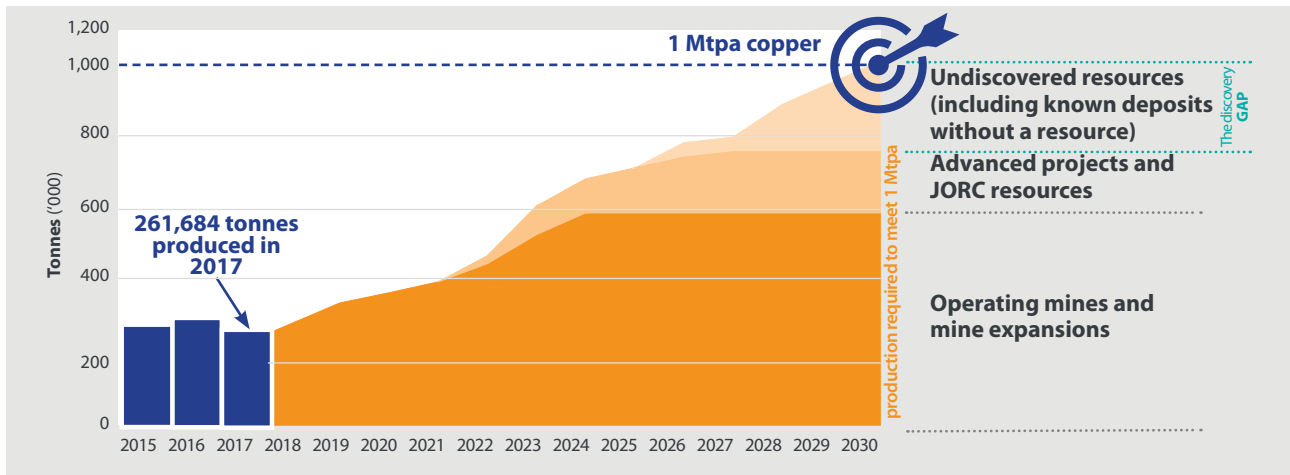
COPPER SCORECARD 2017



1. PACE budget; 2. Fraser Institute Annual, Survey of Mining Companies 2017; 3. ABS Cat. 8412.0; 4. Company releases; 5. MRD Production Returns; 6. Nyrstar and Adchem; 7. ABS custom dataset; 8. MRD survey-direct employment; 9. Econsearch Mining Equipment Technology Services (METS) multiplier 1.3

Tracking toward 1 Mtpa Copper to the World

Mine expansions, new mines and advanced projects have progressed during the year, positioning the State for increased future production and exports. Given that the lag time from discovery to development may be more than 10 years, the challenge remains to make copper resource discoveries now, to address the discovery gap of the future.



Production from South Australia's copper mines

In 2017, South Australia achieved production of 261,684 tonnes of copper valued at \$2.0 billion. This includes 123,233 tonnes of copper concentrate valued at \$901 million and 138,451 tonnes of copper cathode valued at \$1.1 billion.

Mine	Company	2016 actual* (tonnes)	2017 actual (tonnes)	2018 company guidance (tonnes)
Olympic Dam (copper cathode)	BHP	168,600	142,400	135,000 (FY 2018)
Prominent Hill (copper in concentrate)	OZ Minerals	116,882	112,008	100,000-110,000
Kanmantoo (copper in concentrate)	Hillgrove Resources	13,624	14,802	22,000-24,000
Production from other mines (aggregated)	—	<100	<100	—

*Volume reported by companies do not sum to the total mine gate production sale value of 261,684 tonnes, reported by the Mineral Resources Division.



Copper project pipeline in South Australia

EXPLORATION

(positive drilling intercepts, assays or anomalies)

\$15.2 million

copper exploration in 2017
including \$1.3 million
PACE Discovery Drilling



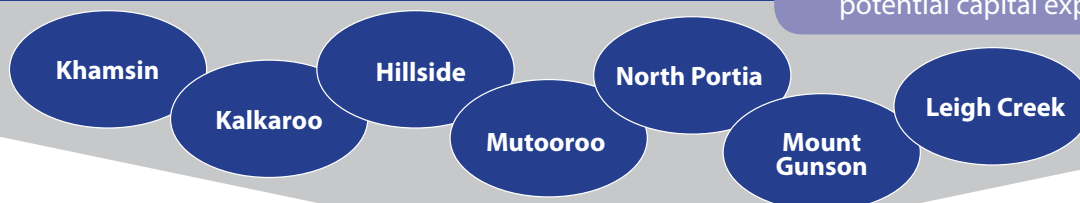
130 companies with
400+ EXPLORATION LICENCES for copper

ADVANCED PROJECTS

(JORC resource, feasibility studies underway)

\$1 billion

potential capital expenditure



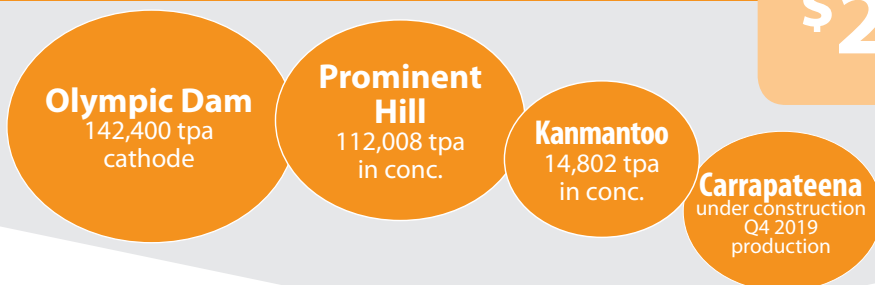
MAJOR MINES

(producing and exporting copper cathode & copper in concentrate)

261,684t

\$2.0 billion

in 2017



1

Mtpa

COPPER to the **WORLD**

Achievements to June 2018

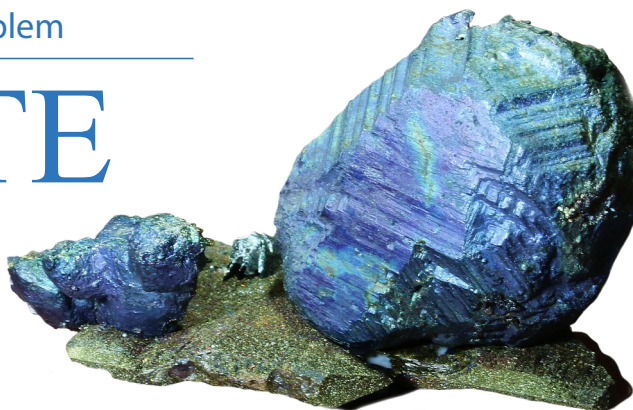
ACTION THEME 1: Exploration, discovery and information	2018 ACTIONS
<p>PACE Copper</p> <ul style="list-style-type: none"> ✓ Gawler Craton Airborne Survey (77% complete) – one of the world’s largest high-resolution airborne geophysical programs, aimed at regenerating mineral exploration in the Gawler Craton ✓ Coompana drilling (complete) and gravity survey released to determine prospectivity of basement geology beneath the Nullarbor <p>Promote the South Australia Drill Core Reference Library (SADCRL) at Tonsley</p> <ul style="list-style-type: none"> ✓ 360,000 metres of drill core material viewed by 1445 visitors and explorers in the past year ✓ 65 events and industry forums including all Copper Strategy Success Seminars and International Copper Technology and Research Hub workshops 	<p>Complete <i>PACE</i> Copper airborne surveys and report results to industry and the geoscience community</p> <p>Develop prospectivity models with industry and researchers</p>
ACTION THEME 2: Developing innovative infrastructure, services and research	2018 ACTIONS
<p>Strategic approach to copper research</p> <ul style="list-style-type: none"> ✓ Opportunities sought to deliver the Copper Development Road Map ✓ Copper related programs at Institute for Mineral and Energy Resources, University of Adelaide, and Future Industries Institute, University of South Australia continue to be supported <p>National mining services</p> <ul style="list-style-type: none"> ✓ Copper Strategy and South Australia Minerals and Energy Services Strategy linked to support development of a world class services supply chain for the copper industry 	<p>Develop opportunities identified in the Road Map</p>
ACTION THEME 3: Building industry and community capacity	2018 ACTIONS
<p>Copper Strategy Success Seminars (CS³) delivered</p> <ul style="list-style-type: none"> ✓ <i>Making Good Decisions</i> (15 Nov 17) ✓ <i>Leading your organisation in an age of disruptive technologies</i> (23 Nov 17) ✓ <i>Tips for Mineral Explorers for Attracting Investment</i> (14 Feb 18) ✓ <i>5G Resources and Heavy Industry Forum</i> (22 Feb 18) <p>Strengthening community engagement</p> <ul style="list-style-type: none"> ✓ South Australian Museum copper exhibit (June/July 2017) ✓ Supported <i>Stronger Partners Stronger Futures</i> – Aboriginal engagement program and visits <p>Copper promotion campaign</p> <ul style="list-style-type: none"> ✓ Presented at the CRU World Copper conference Chile (April 2017 and April 2018) ✓ Copper to the World Conference, Adelaide (June 26, 2018) 	<p>Continue to build international profile and develop opportunities in South Australia's copper industry</p>

South Australia's Mineral Emblem

BORNITE

Bornite, known as peacock ore, is an ore mineral of copper.

The selection of bornite, in 2017, to become South Australia's mineral emblem highlights the central role of copper to the economic development and future prosperity of South Australia.



This rare specimen of bornite, from the Olympic Dam mine, is on display at the South Australian Museum.