



Australian Government  
Geoscience Australia

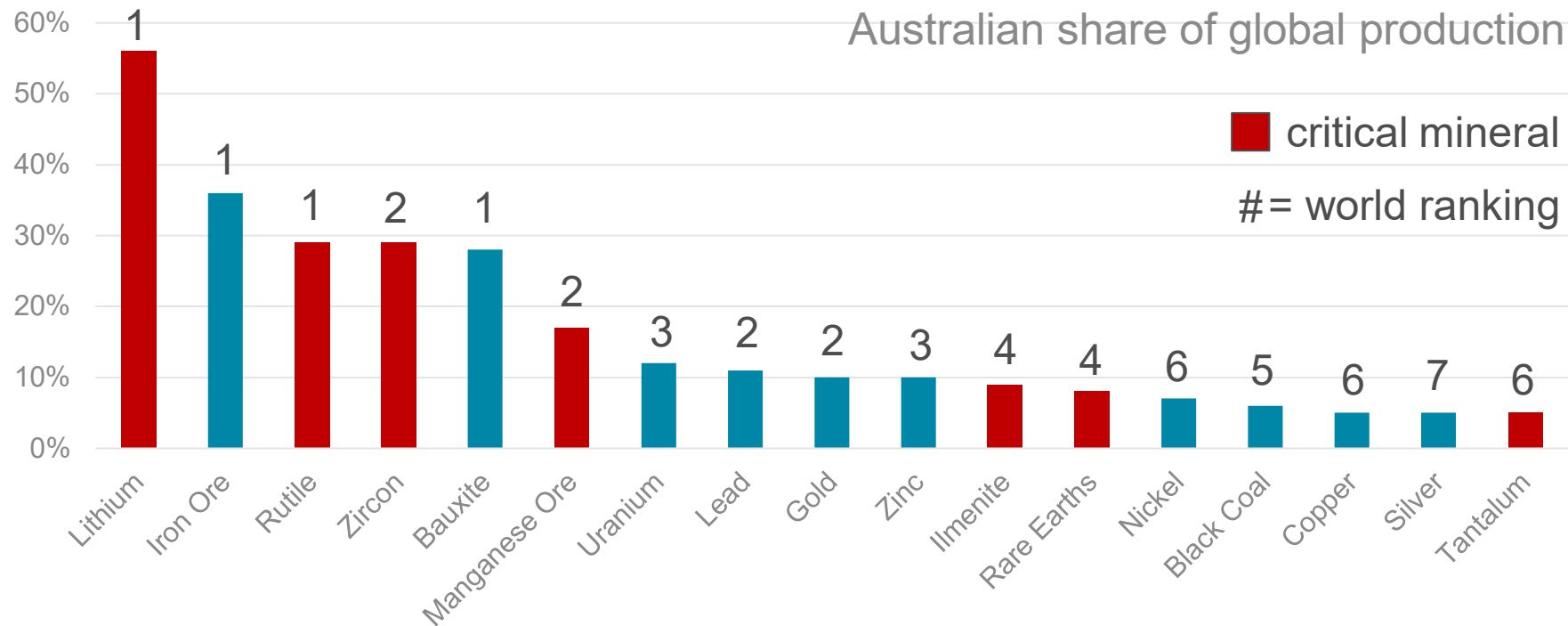
# Critical Minerals @ Geoscience Australia

Maximising critical mineral opportunities  
to meet global demand

**Dr Andrew Heap** | Chief Minerals, Energy and Groundwater Division

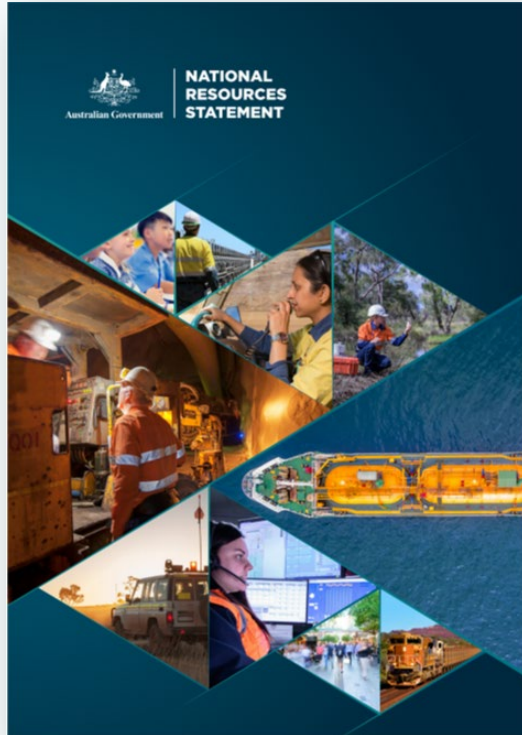
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# Australia's resources matter to the world



Australia's Identified Mineral Resources 2020

# Australian Government critical minerals priorities



# Geoscience Australia's role in critical minerals

**Building  
Australia's  
resources  
wealth**

**Supporting  
Australia's  
community  
safety**

**Securing  
Australia's  
water  
resources**

**Managing  
Australia's  
marine  
jurisdictions**

**Creating  
a location-  
enabled  
Australia**

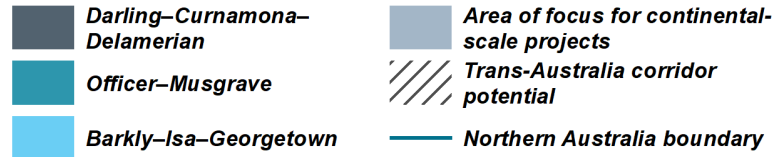
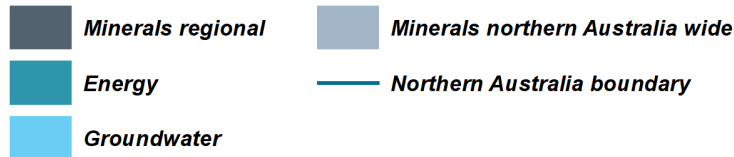
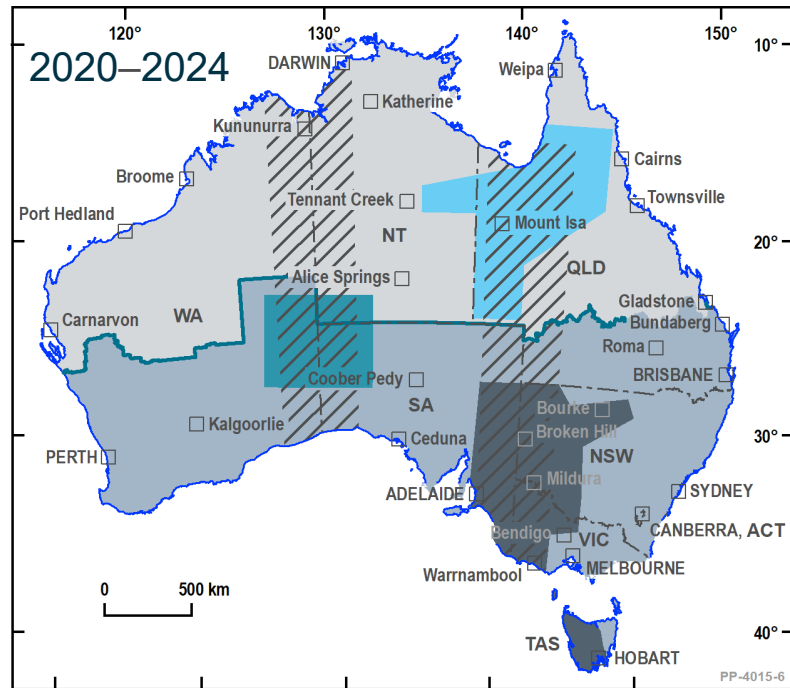
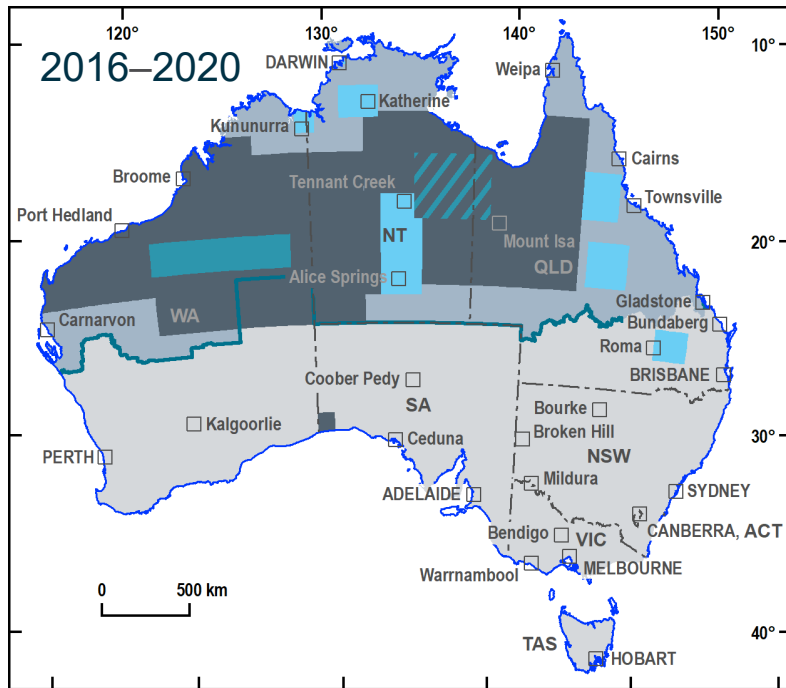
**Enabling  
an informed  
Australia**

Geoscience Australia Strategy 2028

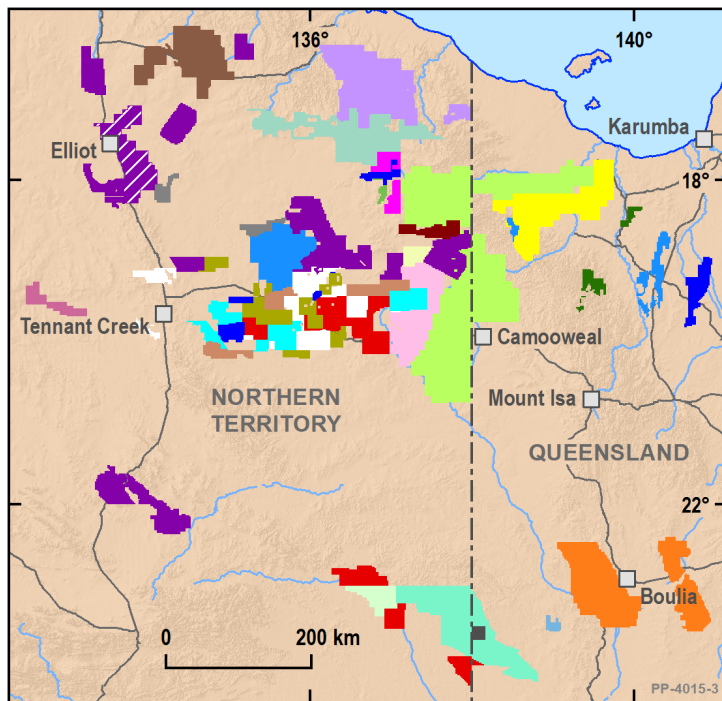
We will stimulate mineral exploration investment, including critical minerals, to open up new producing provinces with mineral endowment worth over AU\$100b.

We will provide geoscience information to support new mineral and energy exploration technologies, and drive new discoveries.

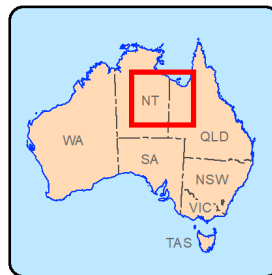
# AU\$225m Exploring for the Future program



# Tenement uptake from the Exploring for the Future program



Current as at May 2021. Total area of tenements granted and under application exceeds 150 000 km<sup>2</sup>



Anglo American Exploration Pty Ltd

Armour Energy Ltd

Middle Island Resources Ltd

Baudin Resources Pty Ltd/ BHP joint venture

Baudin Resources Pty Ltd

Brema Resources Pty Ltd

B.S.T. Explorations Pty Ltd

Castillo Copper Ltd

Cedar Resources Pty Ltd

Chalco Resources Pty Ltd

Cientifica Pty Ltd

Harkiss Mineral Discovery Pty Ltd

Hartz Rare Earths Pty Ltd

Inca Minerals Ltd

Knox Resources Ltd

Liberation Resources Pty Ltd

Minerals Pty Ltd

Newcrest Operations Ltd

Pennant Resources Pty Ltd

Pinnacle Gold Pty Ltd

Plutonic Ltd

Redbank Operations Pty Ltd

Red Metal Ltd

Santos Ltd

Strategic Energy Resources Ltd

Taragon Valley Pty Ltd

Teck Australia Pty Ltd

Major road

Watercourse

Town/location

# Mineral Potential Mapper – Assessment of Ni-Cu-PGE mineral potential



Australian Government  
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Exploring for the Future

<https://portal.ga.gov.au/persona/eff>

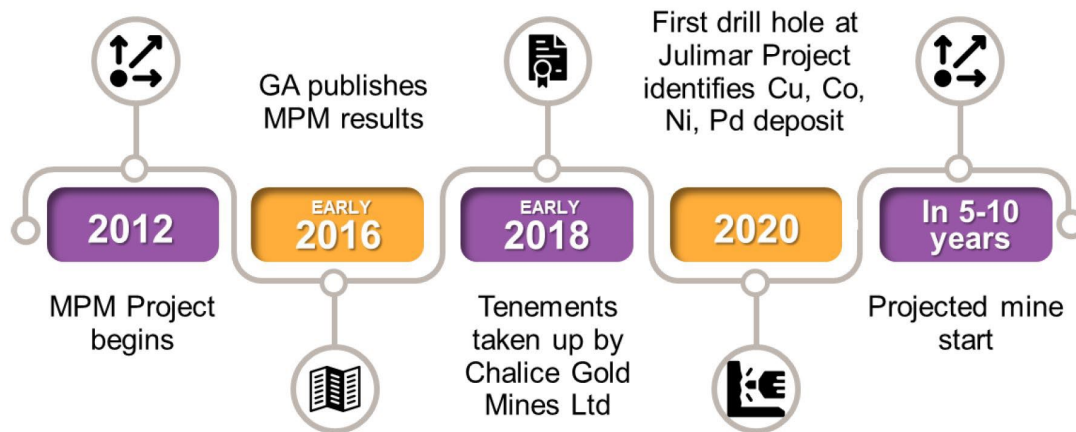


About Layers Location Search Data & Publications

Tools Clip Map Narrator



# Julimar Discovery – Independent Assessment



ACIL ALLEN CONSULTING

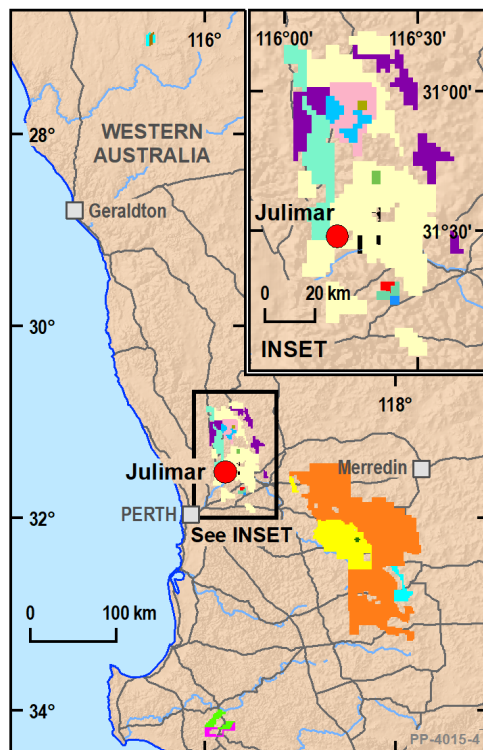
Expenditure (4 years) (2018 AU\$)		Net benefit for every AU\$ spent by Geoscience Australia (if Julimar prospect becomes a mine)	
GA	Partners	Australia	Australian Government
\$1.6m	-	\$160 – \$525	\$49 – \$157

>2,000% Total Shareholder Return since January 2020

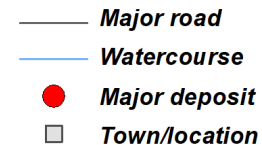
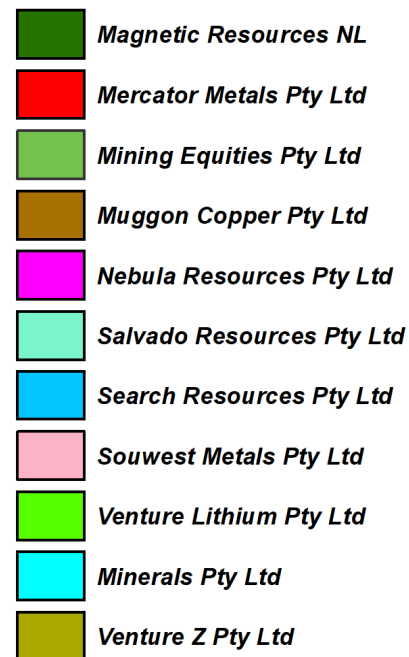


chalicemining.com

# Julimar – Unlocking a new mineral province in SW Australia



Current as at May 2021. Total area of tenements granted and under application exceeds 15 000 km<sup>2</sup>



# Critical Minerals Mapping Initiative



Standardised  
ore deposit  
classification



Improved predictive  
power of geoscience  
datasets



International  
critical minerals  
in ores dataset



Identifying new  
opportunities for critical  
mineral supply and target  
follow-up sampling



Mineral potential  
mapping



Refinement of  
prospectivity mapping



Australian Government

Geoscience Australia

# Thank You

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