



# Base Metals

## VICTORIA – an emerging base metal province

Victoria, Australia, is emerging as a new province for copper and other base metals, following a number of significant discoveries and projections for strong future resource prospectivity.

### Proven prospectivity

Base metals occur throughout the State of Victoria with particularly strong prospectivity in the State's east and west. Base metal deposits present in Victoria contain copper, lead, zinc, molybdenum, nickel, tin, and antimony.

### Prospective areas

The Geological Survey of Victoria (GSV) has recently identified a number of large prospective areas which could contain significant base metal deposits.

1. In western Victoria, GSV studies have identified a belt of rock types and alteration consistent with the presence of large, disseminated resources potentially similar in type to those found in base metal rich areas of South America. The region is prospective for both porphyry copper-gold and volcanic-hosted massive sulphide (VMS) systems. Younger cover means only a small portion of the belt has been subject to modern and systematic mineral exploration.
2. In the east of the State recent studies indicate an extension into Victoria from New South Wales (NSW) of Macquarie Arc rocks, which host large copper-gold porphyry deposits. The corresponding geology in NSW hosts the Cadia-Ridgeway deposit containing 500,000 tonnes of copper and five million ounces of gold.



3. Eastern Victoria also has base metal resources in rocks that are younger than the Macquarie Arc. For example, the Wilga and Currawong deposits contain undeveloped resources of 12.5 million tonnes @ 2.1% copper, 4.4% zinc and 0.7% lead in a VMS setting.
4. In the far west of the State there are geological characteristics which directly correlate to those in adjacent areas in South Australia that contain base metal deposits. This represents a significant new exploration opportunity in far west Victoria for copper, zinc, lead and silver.

### Exploration and development

Copperchem's proposed Stockman Base Metals Project near Benambra in East Gippsland (north eastern Victoria) includes development of the Wilga and Currawong deposits to produce copper-zinc-silver-gold concentrates for export.

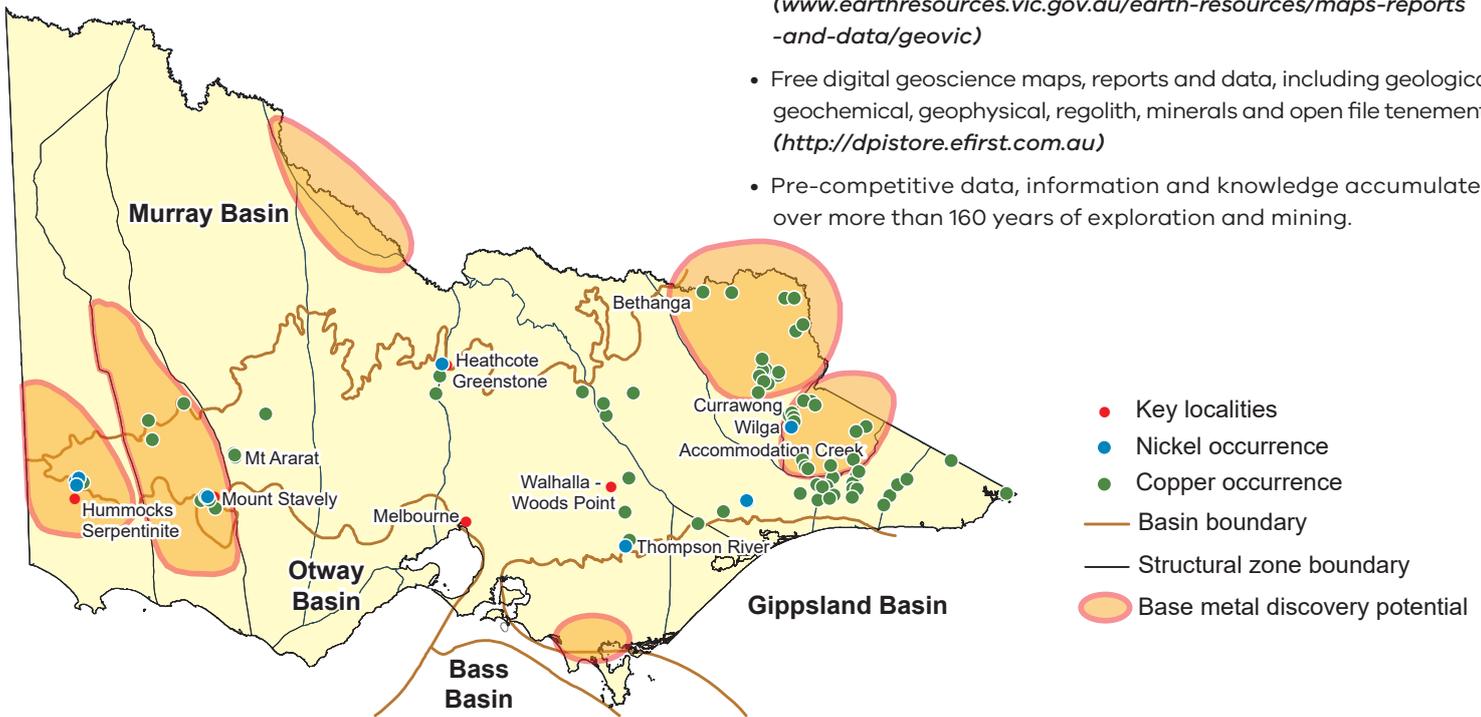
## Victoria is committed to economic development

Victoria provides a positive business environment, efficient regulation and security of tenure for explorers and developers.

To access more information about Victoria's gold and other minerals, visit:

[www.earthresources.vic.gov.au](http://www.earthresources.vic.gov.au)

## Prospective base metal areas



- Key localities
- Nickel occurrence
- Copper occurrence
- Basin boundary
- Structural zone boundary
- Base metal discovery potential

## Victoria offers advice and information to assist explorers, including:

- A 3D geological model that can be used to analyse resource potential, predict the location of undiscovered earth resources and allow the development of four-dimensional resource management frameworks (<http://dpistore.efirst.com.au>)
- An online tool to create customised scientific maps in real time or to view, download or interrogate geoscientific databases, including geology, drill holes and geochemistry ([www.earthresources.vic.gov.au/earth-resources/maps-reports-and-data/geovic](http://www.earthresources.vic.gov.au/earth-resources/maps-reports-and-data/geovic))
- Free digital geoscience maps, reports and data, including geological, geochemical, geophysical, regolith, minerals and open file tenements (<http://dpistore.efirst.com.au>)
- Pre-competitive data, information and knowledge accumulated over more than 160 years of exploration and mining.

## New opportunities

- New tectonic models developed for south east Australia by the Geological Survey of Victoria (GSV) offer different geological correlations to those previously accepted, and have unveiled new orogenic gold, copper and other base metal greenfields opportunities within Victoria.
- Victoria may have parts of two mineralised Arc systems; a Cambrian Andean-style system in the west – the Stavely Arc, and parts of the Ordovician Macquarie Arc (known to host large porphyry-type copper-gold ore deposits in NSW) in the east.
- The Stavely Arc, in western Victoria, may be exposed as the Mount Stavely Volcanics, and as similar calc-alkaline volcanics near the Black Range. It is under-explored. The Mount Stavely Volcanics are already known to host copper-gold mineralisation at the 'Thursdays Gossan' porphyry prospect and the Eclipse prospect of porphyry-VMS affinity. Both exhibit supergene chalcocite mineralisation. Over 400km of untested strike length is concealed under younger cover in a rural setting, which offers a new and largely untested search space.
- Magnetic data and the new tectonic model show how the Macquarie Arc may extend south into north-eastern Victoria. Outcrops of the arc, or the depth of these rocks in Victoria, have not yet been determined.
- A new stratigraphic correlation by the GSV shows how the Kanmantoo-Strathalbyn SEDEX province may extend into far western Victoria.
- The GSV provides pre-competitive data to interested companies. The GSV and Geoscience Australia are jointly investigating the potential for mineral systems within the Stavely Arc.

### Victoria, Australia

- Victoria boasts political and economic stability and low sovereign risk.
- Victoria features easy access to sophisticated infrastructure, established markets and export pathways.
- Victoria provides opportunities to have an enviable lifestyle in a secure environment with world class facilities and services.

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