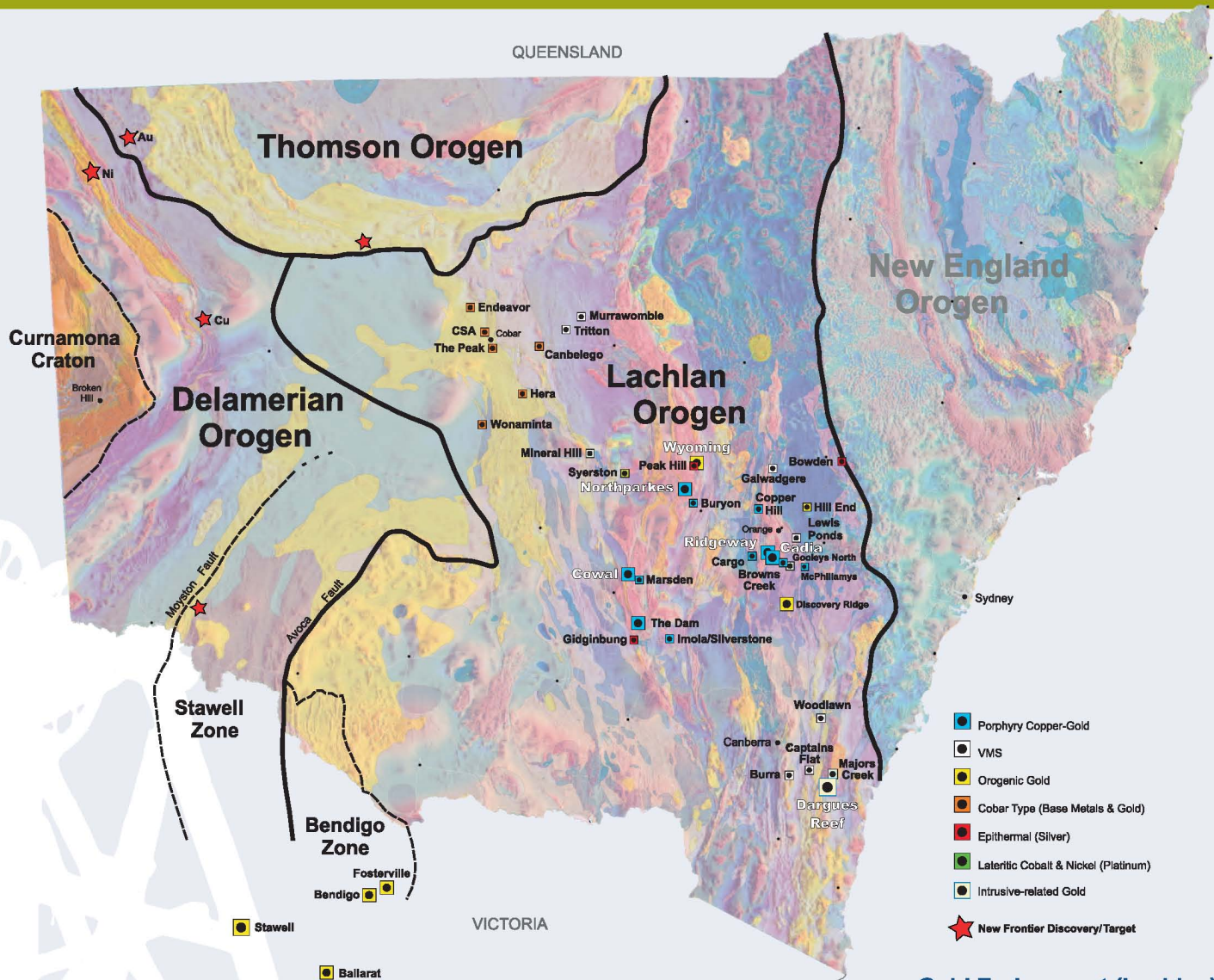


# AUSTRALIA - *more to explore*

## LACHLAN - THOMSON - DELAMERIAN OROGENS



### Gold Endowment (Lachlan)

■ Orogenic Gold	+3000t
■ Porphyry Gold	+1000t
■ Cobar Basin Gold	+100t

### Lachlan Orogen

The Lachlan Orogen underlies most of New South Wales, extending south into Victoria and eastern Tasmania. The oldest rocks are Ordovician continental margin, craton-derived turbidite packages, deposited on Cambrian oceanic crust, that are now separated from the Ordovician intra-oceanic Macquarie Arc by suture zones containing relics of Ordovician ocean crust. The Macquarie Arc hosts world class porphyry Cu-Au deposits in the Cadia valley and Northparkes districts. Smaller deposits occur at Cargo and Copper Hill. Structurally controlled Au-Cu occurs at Cowal. Silurian volcanic-hosted, structurally controlled base metal deposits at Captains Flat, Woodlawn and Mineral Hill occur in volcanic-rich rifts. Sediment-hosted structurally controlled deposits in sediment rich basins include those in the Hill End Trough as well as three operating gold-base metal mines in the richly endowed Cobar Basin. There are excellent opportunities for further major discoveries under shallow cover.

### Thomson Orogen

The Thomson Orogen lies north of the Lachlan Orogen and extends north into central Queensland. The NSW portion of the orogen has potential for structurally controlled gold and base metal deposits in Cambrian to Ordovician oceanic crust and arc rocks, craton-derived turbidites, and Silurian-Devonian basins all within current exploration depths. A New Frontiers program of deep crustal seismic, gravity, regolith mapping, regional geochemistry, drilling, depth to basement maps and 3D modelling of mineral systems will aid area selection and significantly reduce exploration risk.

### Delamerian Orogen

The Delamerian Orogen lies west of the Lachlan Orogen. Except for the Palaeoproterozoic-Neoproterozoic core around Broken Hill, most of the orogen is overlain by recent cover or by the Neogene Murray Basin. However, recently acquired geophysical data shows that mineralised rock packages such as the gold-rich Stawell Zone in the eastern part of the Delamerian Orogen in western Victoria extends north into New South Wales. A New Frontiers program of gravity, regional geochemistry, drilling, depth to basement maps and 3D modelling of mineral systems will aid area selection and significantly reduce exploration risk.

AUSTRALIA - *more to explore*

## LACHLAN - THOMSON - DELAMERIAN OROGENS



### NEW FRONTIER OPPORTUNITIES

### NEW SOUTH WALES

#### WYOMING

The resource at the Alkane Exploration Ltd Wyoming discovery now totals 7.13 million tonnes grading 2.70 g/t Au. Recent exploration has identified three new areas of mineralisation in the structural corridor containing the known resources. Modelling of the resources at Wyoming One and Wyoming Three is continuing in conjunction with a feasibility study. The latest drilling data includes 66 m @ 2.33 g/t Au. The deposit is an orogenic gold system hosted by Ordovician volcanics. Extensive alteration and veining permeate the volcanics. The deposit is one of a number of orogenic gold systems within a regionally extensive high strain zone in Ordovician island arc volcanics, intrusives and related sedimentary rocks.  
[www.alkane.com.au](http://www.alkane.com.au)

#### CADIA VALLEY OPERATIONS

The mineralisation in the Cadia Hill and Ridgeway mining district is a giant system, ranked by gold content as the 6th largest copper-gold porphyry system in the world. Current global resource figure for the Cadia district is 1530 Mt containing an estimated 32 million ounces of gold and 4.7 million tonnes of copper. The operator, Newcrest Mining Ltd, is producing from the Ridgeway and Cadia Hill mines with development being undertaken at Ridgeway Deep. In addition, development of the Cadia East deposit, containing an estimated 6 million ounces of gold and 670,000 tonnes of copper is currently being planned. The mineralisation lies within a northwest trending corridor two kilometres wide and six kilometres long. The gold mineralisation is hosted by sheeted quartz veining in Ordovician basaltic to andesitic volcanics and intrusives. Open pit mining commenced in August 1998 at Cadia Hill. Underground mining of the Ridgeway deposit commenced in April 2002. Ridgeway is the westernmost identified deposit in the Cadia district. Gold mineralisation at Ridgeway is hosted by quartz veins, sheeted quartz veins and stockworks in a monzonite that has intruded Ordovician volcanics and sediments.  
[www.newcrest.com.au](http://www.newcrest.com.au)

[www.newcrest.com.au](http://www.newcrest.com.au)

#### COPPER HILL

Copper Hill is 45km from the large Cadia Valley gold-copper mine. Both Cadia and Copper Hill are porphyry Cu-Au systems located within the Molong Volcanic Rise, a magmatic complex of intrusive and volcanic rocks of Ordovician age. The resource at Copper Hill contains over 455,000 tonnes of copper and 1.4 million ounces of gold (136Mt at 0.33% copper & 0.32g/t gold using 0.2% copper cut-off). Recent drilling intersections include 286 m at 0.42% Cu and 0.4 g/t Au. Golden Cross Resources has forecast an updated resource estimate in the first quarter of 2007. Mineralization at Copper Hill is over 2 km in strike length and up to 0.5km wide.  
[www.goldencross.com](http://www.goldencross.com)

[www.goldencross.com](http://www.goldencross.com)

#### COWAL

Barrick Gold Corporation's new Cowal mine, located in central NSW 32 km north of West Wyalong and approximately 350km west of Sydney has commenced operations the first gold was poured on April 30, 2006. At Cowal, production is continuing to ramp up, as grades and throughput rates are expected to improve. Based on a reserve of 2.5 million ounces of gold and an additional resource of 1.6 million ounces of gold (2005) the mine life is expected to exceed 10 years. The E42 deposit at Cowal is the largest of several drill-identified deposits that are located on the western edge of the Lake Cowal complex. The deposits occur in favourable lithologies and structure within a north-south corridor adjacent to a large body of diorite-gabbro. The E42 deposit is hosted by a suite of Ordovician age volcanic sediments and lavas.  
[www.barrick.com](http://www.barrick.com)

[www.barrick.com](http://www.barrick.com)

#### DARGUES REEF

Moly Mines Limited has established an inferred resource totalling 3,720,000 tonnes @ 3.0 g/t Au for 360,000 oz at the Dargues Reef gold project at Majors Creek in southeast New South Wales. The limits of the mineralisation have yet to be established. The deposit consists of two main coalescing near-vertical gold lodes within a larger mineralised structurally-controlled lode-system in the roof zone of the Braidwood Granodiorite. The two lodes thicken where they intersect creating a steeply east-plunging shoot. The geometry of the deposit with its near vertical attitude, lends itself to underground mining. As a result of its exploration success at Dargues Reef the Company has expanded its Majors Creek land holding to cover over 700 square kilometres of the gold prospective Braidwood Granodiorite.  
[www.molymines.com](http://www.molymines.com)

[www.molymines.com](http://www.molymines.com)

#### HERA

CBH Resources Limited has acquired the Hera deposit located 100 kilometres from Cobar and 150 km from its existing Endeavor base metal mine. The deposit contains an estimated resource totalling 1.9 million tonnes at 6.7g/t Au, 2.8% Zn, 2.5% Pb and 14 g/t Ag. CBH is planning to establish an underground mine to produce between 200,000 and 300,000 tonnes of ore per year and to treat the ore at its existing Endeavor treatment plant. Studies have commenced to determine the optimal production plan and applications have been lodged for approval to commence an exploration decline access to the orebody. Significant potential for expanding the current resource exists with drilling by the previous owner intersecting 6.9 metres at 17.1g/t Au, 13.5% Zn, 8.2% Pb and 45g/t Ag. These results have yet to be included into the current resource model.  
[www.cbhresources.com.au](http://www.cbhresources.com.au)

[www.cbhresources.com.au](http://www.cbhresources.com.au)

#### COBAR

Three major underground mines are currently being worked in the Late Silurian to Early Devonian Cobar Basin. These are the Endeavor mine (CBH Resources Limited), the CSA mine (Cobar Management Pty Limited, a wholly owned subsidiary of Glencore International AG) and the Peak mine (Goldcorp Inc). CBH is upgrading the Endeavor zinc/lead/silver mine to establish a consistent throughput rate of 1.2 Mtpa, lower the operating costs and increase metal recoveries. The current ore reserves for the mine stand at 19.4 million tonnes at 5.7% Zn, 3.3% Pb, 0.2% Cu and 51g/t Ag. The Peak mine includes three separate underground operations, New Cobar, New Occidental and Perseverance deposits. Recent exploration drilling has identified significant down-dip extensions to the New Occidental, Perseverance and Peak ore bodies. The ore reserves for the project are 2.06 Mt assaying 5.86 g/t Au and 0.71 % Cu.  
[www.cbhresources.com.au](http://www.cbhresources.com.au), [www.cmpl.com.au](http://www.cmpl.com.au)

The CSA mine has an ore reserve of 2.4 Mt at 6.31 % Cu and 24 g/t Au. Exploration below the existing mine has identified additional resources.

The Cobar Basin remains highly prospective with recent discoveries including 12 m at 132 g/t Ag and 12 m at 102 g/t Ag at the Gundaroo prospect by Cobar Consolidated Resources Limited.

[www.cbhresources.com.au](http://www.cbhresources.com.au), [www.cmpl.com.au](http://www.cmpl.com.au)

[www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au)

**new**  
**frontiers**  
new south wales



NSW DEPARTMENT OF  
PRIMARY INDUSTRIES