Antimony usually occurs as stibnite (antimony trisulfide, $\text{Sb}_2\text{S}_3$) with silver and gold commonly obtained in assays of the ore.

Reduced output from China and increased demand has seen a global price increase during the last five years.

New South Wales produced 30,000 t of antimony ore, concentrate and metal from 1870 to 1970 and offers potential for further discovery of antimony deposits.

Antimony occurs in economic concentrations along with Au and W (e.g. Hillgrove).

Metasedimentary rocks and granites of the New England Orogen host over 500 antimony deposits and occurrences.

Opportunities for discovery of deposits containing up to tens of thousands of tonnes of antimony occur in the New England Orogen.

Geological setting

Antimony deposits in New South Wales (NSW) are associated with orogenic deposits which are strongly controlled by regional to district-scale faults, veins and fractures in metasedimentary and felsic igneous rocks.

Hydrothermal solutions are typically 200–340°C, with higher temperature fluids associated with gold- and tungsten-bearing deposits (e.g. Hillgrove).

Ore typically occurs as quartz–carbonate–stibnite–arsenopyrite veins and in vein selvages.

The New England Orogen hosts numerous small to medium-sized deposits suited to mining of multiple zones.
Project highlights

Hillgrove, about 375 km north of Sydney, is the largest antimony resource outside of China, containing (proved & probable) 2.195 Mt @ 3.8 g/t Au, 2.1% Sb; (global resource) 6.25 Mt @ g/t Au, 360 g/t W and 1.6% Sb. The deposit is associated with Permo-Carboniferous granites and Palaeozoic metasedimentary rocks. Mineralisation occurs in veins, breccias, sheeted veins, stockwork and as alteration haloes.

Bielsdown/Wild Cattle Creek: (indicated & inferred) 1.59 Mt @ 1.29% Sb, 0.16 g/t Au, 360 g/t W. Drillhole highlights include 51.2 m @ 1.69% Sb; 1.4 m @ 17.1% Sb, 2.2% WO₃; 11.5 m @ 2.32% Sb, 0.34 g/t Au.

Mineralisation at Bielsdown is contained within a silicified breccia core hosted by a sub-vertical fault breccia with adjacent metasedimentary rocks.

Magwood Sb mine produced over 3440 t of antimony.

Taylors Arm district produced around 600 t of antimony metal from historical leases.

Striated prismatic crystals of stibnite (antimony trisulphide) in aggregates from the Taylors Arm district. Large stibnite crystal is 8 cm in length.


United States consumption of primary antimony (1999)

- Flame retardants 57.4%
- Plastics stabilisers and catalysts 9.6%
- Ceramics and glass 9.6%
- Other uses 9.6%
- Pigments 8.9%
- Lead acid batteries 4.1%


Model of orogenic gold and antimony deposits showing typical regional to district structural associations. Adapted from Robb (2005) and Lewis and Downes (2008).

Further information

The Advanced Mineral Projects & Exploration Highlights in NSW Map summarises recent exploration activities and ore reserve/resource announcements. This map is updated every six months and is available at www.resourcesandenergy.nsw.gov.au.