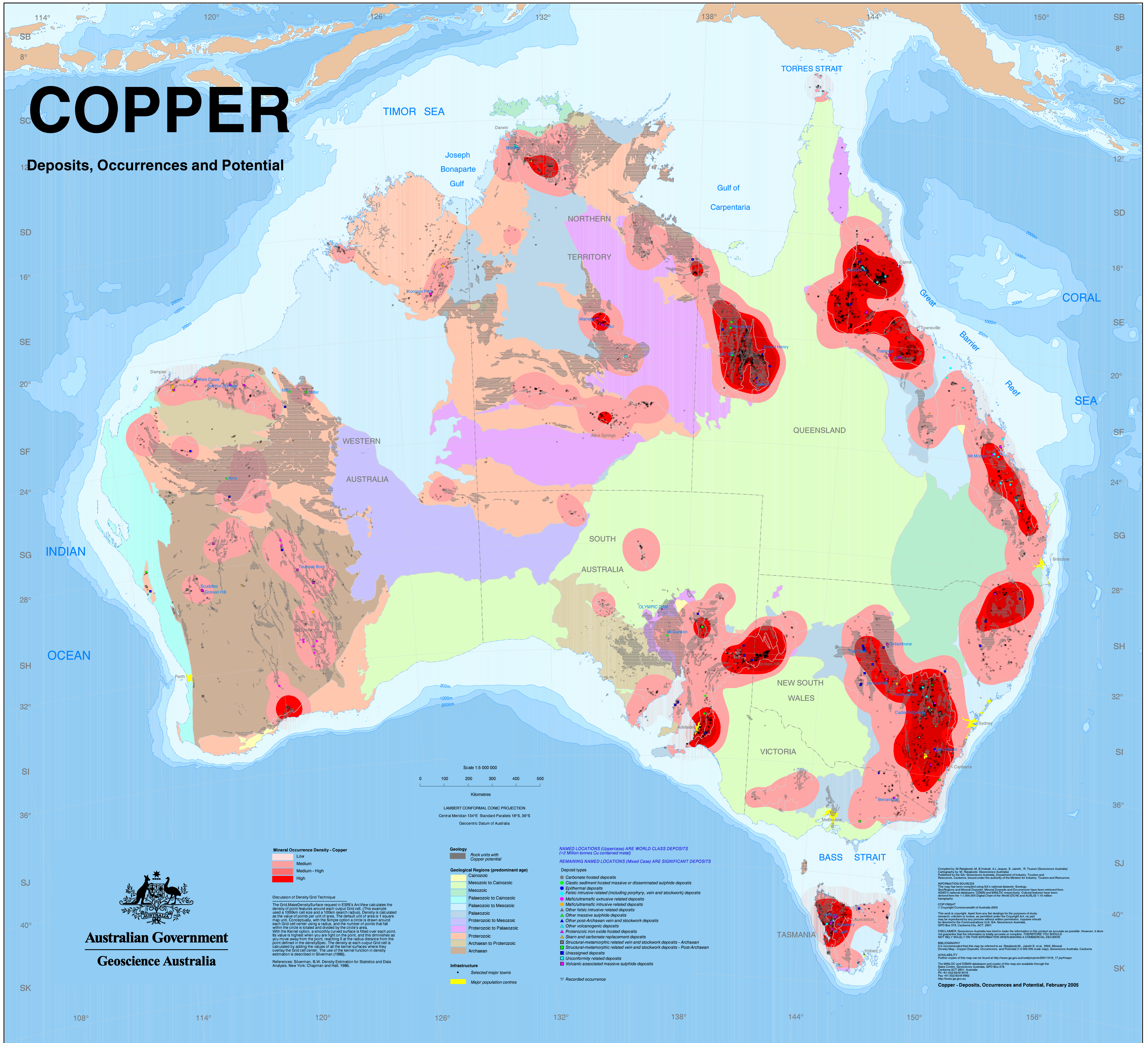


COPPER

1. Deposits, Occurrences and Potential



Australian Government
Geoscience Australia

Mineral Occurrence Density - Copper
Low
Medium
Medium - High
High

Discussion of Density Grid Technique
The Grid MakeDensitySurface request in ESRI's ArcView calculates the density of point features around each output Grid cell. (This example uses a 1000m cell size and a 100m search radius). Density is calculated as the value of points per unit of area. The default unit of area is 1 square map unit. Conceptually, with the Simple option a circle is drawn around each Grid cell center using a radius, and the number of points that fall within the circle is totaled and divided by the circle's area. With the Kernel option, a smoothly curved surface is fitted over each point. Its value is highest when you are right on the point, and this diminishes as you move away from the point, reaching 0 at the radius distance from the point defined in the density dialog. The density of each output Grid cell is calculated by adding the values of all the kernel surfaces where they overlap the Grid cell center. The use of the kernel function in density estimation is described in Silverman (1986).

References: Silverman, B. W. Density Estimation for Statistics and Data Analysis. New York: Chapman and Hall, 1986.

Geology
Rock units with Copper potential

Geological Regions (predominant age)
Cainozoic
Mesozoic to Cainozoic
Palaeozoic to Cainozoic
Palaeozoic to Mesozoic
Proterozoic to Palaeozoic
Proterozoic to Mesozoic
Proterozoic
Archaean to Proterozoic
Archaean

Infrastructure
Selected major towns
Major population centres

NAMED LOCATIONS (Uppercase) ARE WORLD CLASS DEPOSITS (>2 Million tonnes Cu contained metal)
REMAINING NAMED LOCATIONS (Mixed Case) ARE SIGNIFICANT DEPOSITS

Deposit types
Carbonate hosted deposits
Clastic sediment hosted massive or disseminated sulphide deposits
Epithermal deposits
Felsic intrusive related (including porphyry, vein and stockwork) deposits
Metaplutonic intrusive related deposits
Metaplutonic intrusive related deposits
Other felsic intrusive related deposits
Other massive sulphide deposits
Other post-Archaean vein and stockwork deposits
Other volcanicogenic deposits
Proterozoic iron oxide hosted deposits
Skarn and carbonate replacement deposits
Structural-metamorphic related vein and stockwork deposits - Archaean
Structural-metamorphic related vein and stockwork deposits - Post-Archaean
Unassigned deposits
Uncertainty related deposits
Volcanic associated massive sulphide deposits

Recorded occurrence

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APPROXIMATE COORDINATES
This map has been compiled using GDA national datasets. Geology, Geoscience and Mineral Deposits, Occurrences and Potential have been derived from AGDC national datasets. ODM and MMLDC respectively. Cultural features have been derived from the 1:50,000 Digital Chart of the World (DCW) and AGDC 1:50,000.

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BIBLIOGRAPHY
It is recommended that this map be referred to as: Richardson, M., Jurgens, A.L., et al., 2005. Mineral Deposits, Occurrences and Potential (1:500,000 scale map). Geoscience Australia, Canberra.

AVAILABILITY
Further copies of this map can be found at http://www.ga.gov.au/handbook/2001/1018_17.pdf#page=1

The MMLDC and ODM datasets and copies of this map are available through the Sales Centre, Geoscience Australia, GPO Box 978, Canberra City, ACT, 2601, Australia.
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