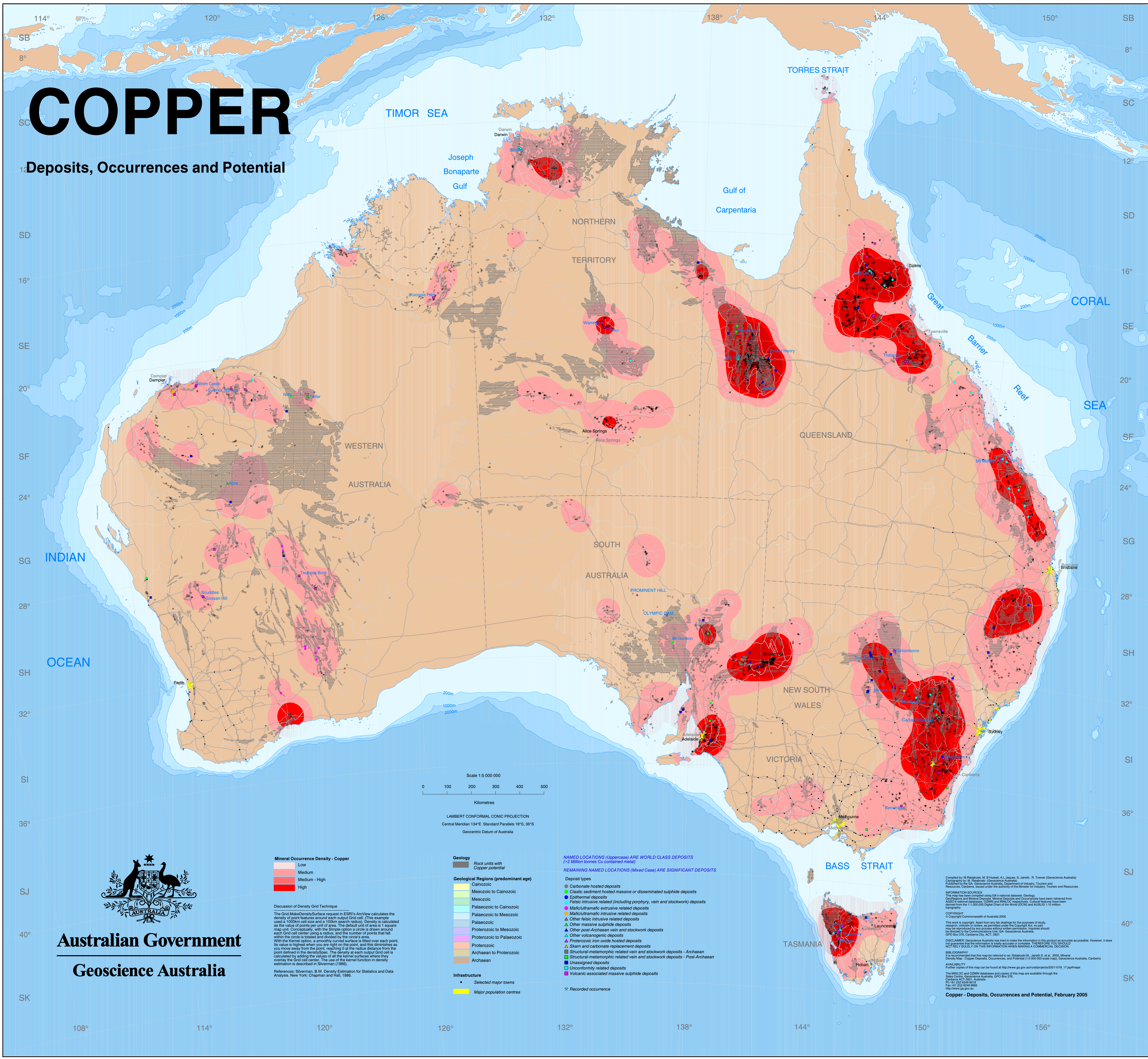


COPPER

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 used 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 then diminishes as you move away from the point, reaching 0 at the radius distance from the point defined in the densitySpec. The density at 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.

Scale 1:5 000 000

0 100 200 300 400 500

Kilometres

LAMBERT CONFORMAL CONIC PROJECTION
Central Meridian 134°E Standard Parallels 18°S, 38°S
Geocentric Datum of Australia

Geology

- Rock units with Copper potential

Geological Regions (predominant age)

- Cainozoic
- Mesozoic to Cainozoic
- Mesozoic
- Palaeozoic to Cainozoic
- Palaeozoic
- Proterozoic to Mesozoic
- Proterozoic to Palaeozoic
- 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
- Mafic/ultramafic extrusive related deposits
- Mafic/ultramafic 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
- Unconformity related deposits
- Volcanic associated massive sulphide deposits

✳ Recorded occurrence

Compiled by: M. Fitzpatrick, M. B. Hackett, A. L. Jacques, S. Jarrett, R. Toomer (Geoscience Australia)
Cartography by: M. Fitzpatrick (Geoscience Australia)
Published by: Geoscience Australia, Department of Industry, Tourism and Resources.
GPO Box 978, Canberra City, ACT, 2601

INFORMATION SOURCES

This map has been compiled using GSA's national database: Geology, Geochronology and Mineral Deposits, Mineral Deposits and Occurrences have been retrieved from AUSGEO national databases. Other and MRDC respectively. Coastal features have been derived from the 1:500,000 Digital Chart of the World (DCW) and AUSGEO 1:10 million topography.

COPYRIGHT

© Copyright Commonwealth of Australia 2005

This work is copyright. Apart from any fair dealing for the purposes of study, research, criticism or review, as permitted under the Copyright Act, no part may be reproduced by any process without written permission. Inquiries should be directed to the Communications Unit, GSA - Geoscience Australia, GPO Box 978, Canberra City, ACT, 2601

DISCLAIMER

Geoscience Australia has tried to make the information in this product as accurate as possible. However, it does not warrant that the information is truly accurate or complete. **THE FOREGOING YOU SHOULD NOT RELY SOLELY ON THIS INFORMATION WHEN MAKING A COMMERCIAL DECISION**

AVAILABILITY

Further copies of this map can be found at http://www.ga.gov.au/national/projects/2001/1018_17.pdf/maps

The MRDC and CNMR databases and copies of the map are available through the State Centre, Geoscience Australia, GPO Box 378, Canberra ACT 2601, Australia
Ph: +61 (0)2 6254 9519
Fax: +61 (0)2 6254 9592
Email: info@ga.gov.au

Copper - Deposits, Occurrences and Potential, February 2005