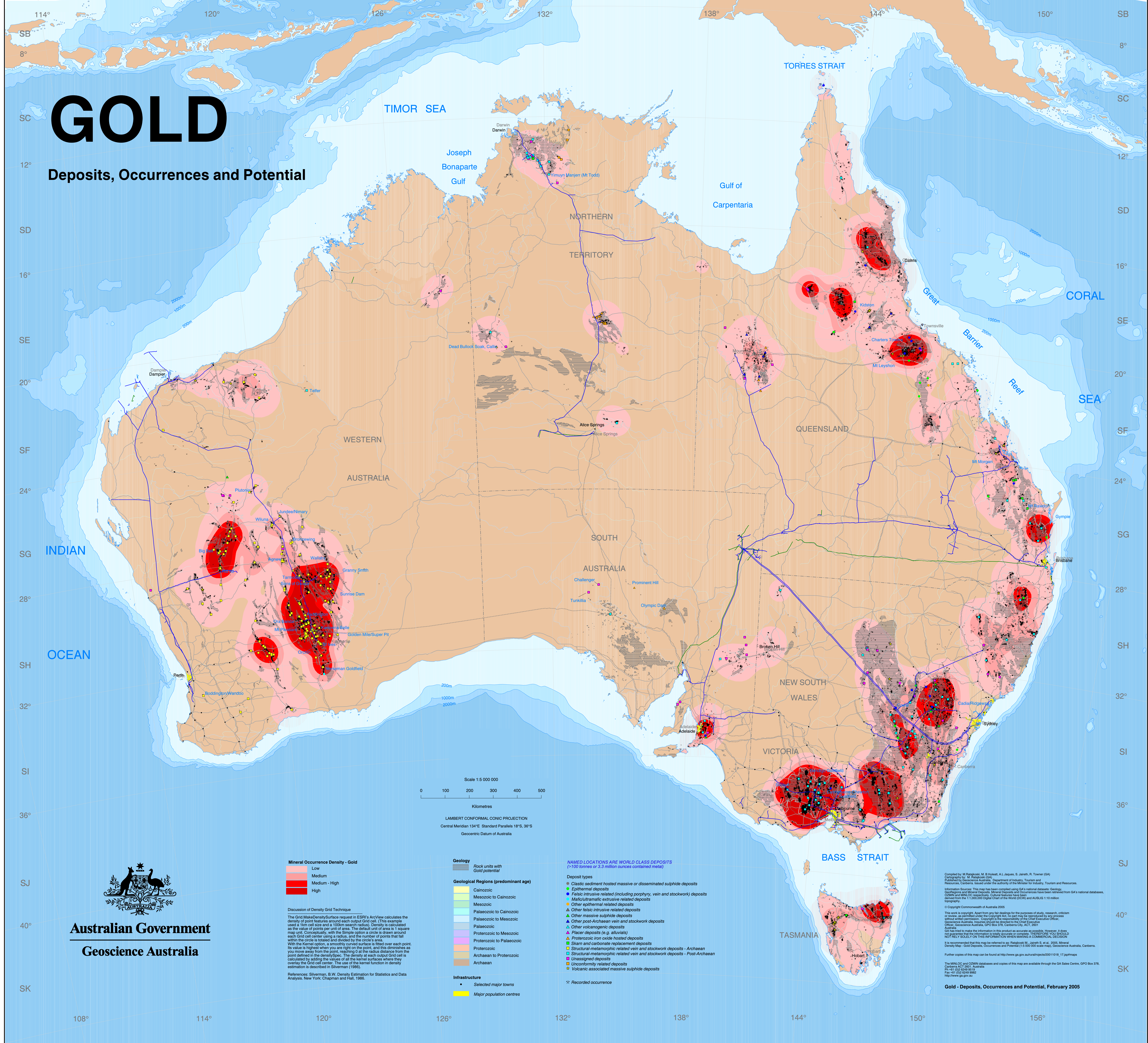


GOLD

Deposits, Occurrences and Potential



Australian Government
Geoscience Australia

Mineral Occurrence Density - Gold

- 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 1km 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. Consequently, 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 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.

Geology

Rock units with Gold potential

Geological Regions (predominant age)

- Cainozoic
- Mesozoic to Cainozoic
- Mesozoic
- Palaeozoic to Cainozoic
- Palaeozoic to Mesozoic
- Palaeozoic
- Proterozoic to Palaeozoic
- Proterozoic to Mesozoic
- Proterozoic
- Archaean to Proterozoic
- Archaean

Infrastructure

- Selected major towns
- Major population centres

NAMED LOCATIONS ARE WORLD CLASS DEPOSITS (>100 tonnes or 3.3 million ounces contained metal)

Deposit types

- Classic sediment hosted massive or disseminated sulphide deposits
- Epithermal deposits
- Felsic intrusive related (including porphyry, vein and stockwork) deposits
- Mafic/ultramafic extrusive related deposits
- Other epithermal related deposits
- Other felsic intrusive related deposits
- Other massive sulphide deposits
- Other post-Archaean vein and stockwork deposits
- Other volcanogenic deposits
- Placer deposits (e.g. alluvial)
- 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

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

Compiled by: M. Ratajski, M. B. Humeat, A.L. Jaques, S. Jireh, R. Towler (GA)
Copyright © by Geoscience Australia
Published by Geoscience Australia, Department of Industry, Tourism and Resources, Canberra, Australia. Copyright is the responsibility of the Chief Executive Officer, Geoscience Australia. Inquiries should be directed to the Chief Executive Officer, Geoscience Australia, GPO Box 974, Canberra City, ACT, 2601

Information Sources: This map has been compiled using GA's national datasets: Geology, GeoRegions and Mineral Deposits. Mineral Deposits and Occurrences have been retrieved from GA's national databases, Geobase and MDA, respectively. Cultural features have been derived from the 1:250,000 Digital Chart of the World (DCW) and AUSLIS 1:100,000 topographic.

© Copyright Commonwealth of Australia 2005

This work is copyright. Apart from any fair dealings 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. Copyright is the responsibility of the Chief Executive Officer, Geoscience Australia. Inquiries should be directed to the Chief Executive Officer, Geoscience Australia, GPO Box 974, Canberra City, ACT, 2601

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

It is recommended that this map be referred to as: Ratajski, M., Jaques, S. et al. 2005. Mineral Density Map - Gold Deposits, Occurrences and Potential (1:5 000 000 scale map). Geoscience Australia, Canberra.

Further copies of this map can be found at http://www.ga.gov.au/natural/geo20011018_17.jsp#ps

The MDA, DCW and Geobase databases and copies of this map are available through the GA Sales Centre, GPO Box 974, Canberra ACT 2601, Australia
Ph +61 (0)2 6268 9112
Fax +61 (0)2 6268 9162
<http://www.ga.gov.au>

Gold - Deposits, Occurrences and Potential, February 2005