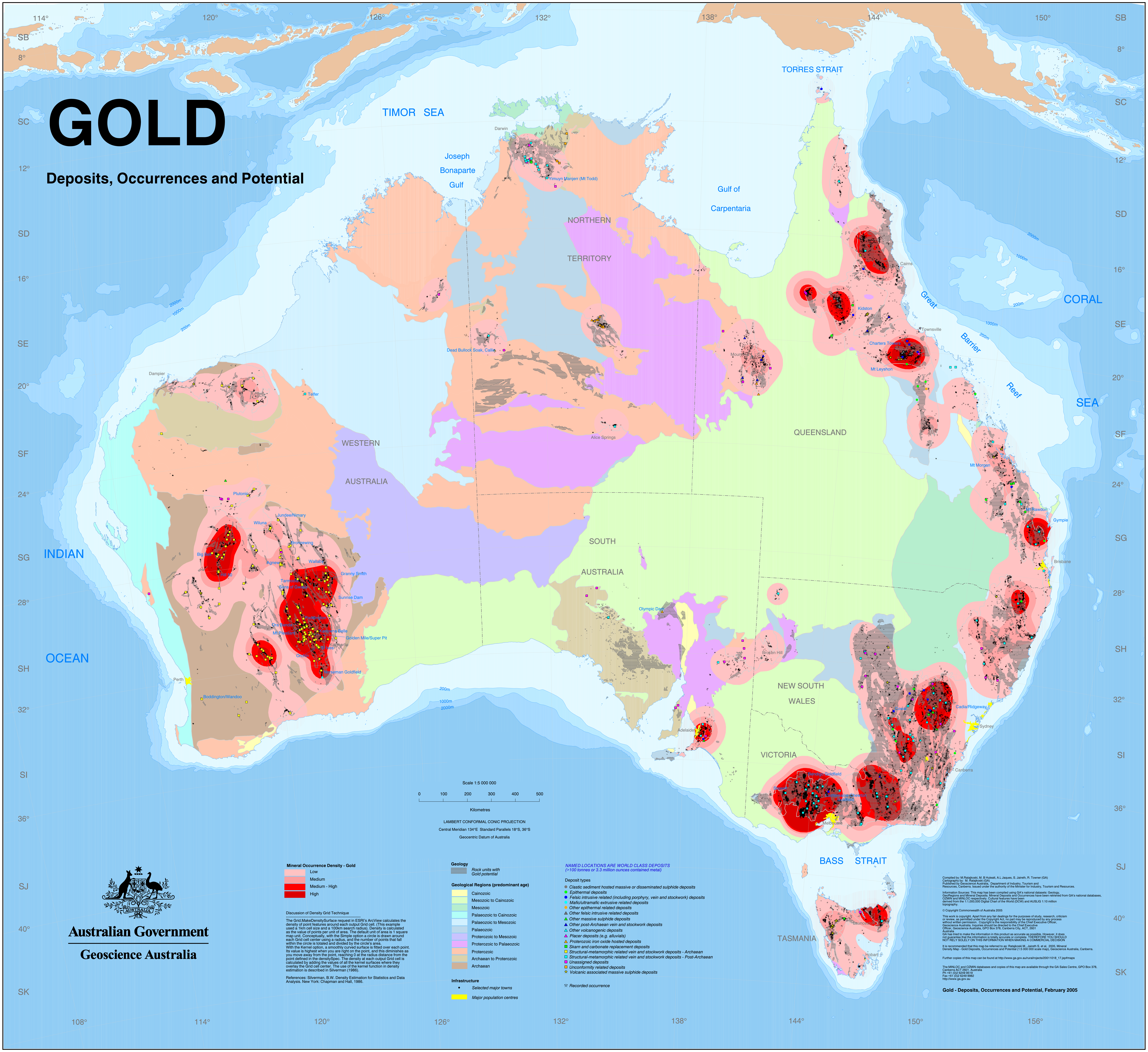
GOLD
Deposits, Occurrences and Potential
TIMOR SEA
Joseph Bonaparte Gulf
Gulf of Carpentaria
TORRES STRAIT
NORTHERN TERRITORY
QUEENSLAND
WESTERN AUSTRALIA
SOUTH AUSTRALIA
NEW SOUTH WALES
VICTORIA
TASMANIA
BASS STRAIT
INDIAN OCEAN
CORAL SEA
Great Barrier Reef
Darwin
Yimuyn Manjerr (Mt Todd)
Dead Bullock Soak, Callie
Alice Springs
Telfer
Dampier
Plutonic
Jundee/Nimary
Wiluna
Bronzewing
Wallaby
Granny Smith
Big Bell
Agnew
Sunrise Dam
Golden Mile/Super Pit
Norseman Goldfield
Perth
Boddington/Wandoo
Olympic Dam
Adelaide
Broken Hill
Cadia/Ridgeway
Sydney
Canberra
Melbourne
Hobart
Brisbane
Gympie
Mt Rawdon
Mt Morgan
Charters Towers
Mt Leyshon
Kidston
Townsville
Cairns
Scale 1:5 000 000
0 100 200 300 400 500
Kilometres
LAMBERT CONFORMAL CONIC PROJECTION
Central Meridian 134°E Standard Parallels 18°S, 36°S
Geocentric Datum of 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 100km 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 densitySpec. The density at each output Grid cell is calculated by adding the values of all the kernel surfaces where they overlay 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 Mesozoic
Proterozoic to Palaeozoic
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
Clastic 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. alluvials)
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
Australian Government
Geoscience Australia
Compiled by: M.Ratajkoski, M. B Huleatt, A.L Jaques, S. Jaireth, R. Towner (GA)
Cartography by: M. Ratajkoski (GA)
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It is recommended that this map be referred to as: Ratajkoski M., Jaireth 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/rural/rojects/20011018_17.jsp#maps
The MINLOC and OZMIN databases and copies of this map are available through the GA Sales Centre, GPO Box 378, Canberra ACT 2601. Australia
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