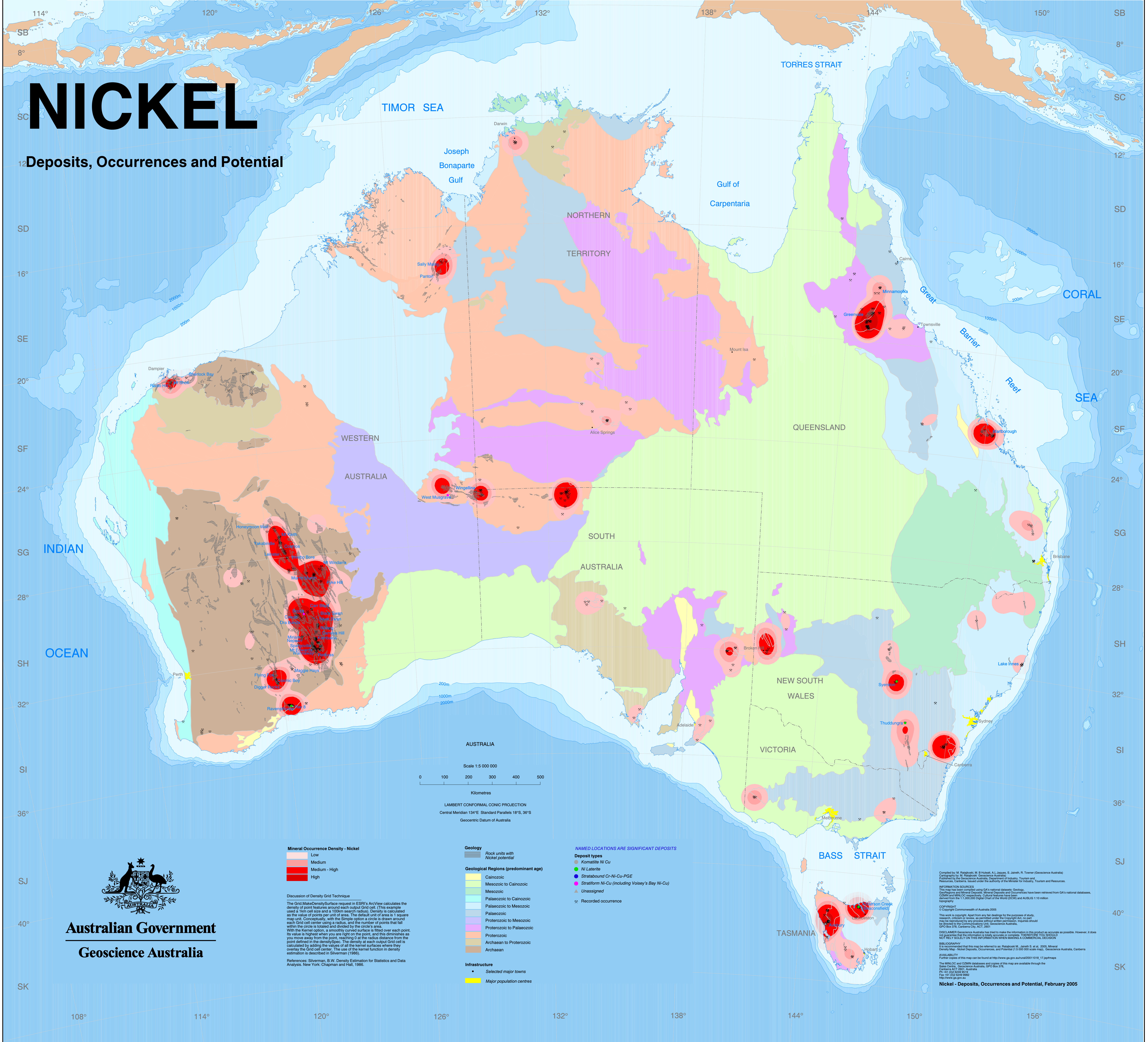


NICKEL

12 Deposits, Occurrences and Potential



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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 1 km 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 densityopac. 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.

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