



# New products from GEOSCIENCE AUSTRALIA to assist nickel & platinum explorers: 2008

## PUBLICATIONS

### Regional Mineral Systems Studies

- 'Guide to using the 1:5 000 000 map of Australian Proterozoic mafic-ultramafic magmatic events', by Hoatson, Claoué-Long & Jaireth, 2008. Record summarises information presented on national map (pto). Geoscience Australia Record 2008/15.
- 'Nickel sulfide deposits in Australia: characteristics, resources, and potential', by Hoatson, Jaireth & Jaques, 2006. Major review paper that describes the diverse settings and resources of nickel sulphide deposits in Australia. Ore Geology Reviews, 29, 3/4, October 2006, 177–241.
- 'Catching the nickel boom: New synthesis will aid nickel explorers'. Short article summarises the major conclusions from the Ore Geology Reviews paper (see above). *AusGeo News* 83, September 2006, 22–27. [www.ga.gov.au/image\\_cache/GA9423.pdf](http://www.ga.gov.au/image_cache/GA9423.pdf)
- 'Nickel sulphide metallogenic provinces: resources and potential'. Short article describes a web-based information and mapping system that defines nickel metallogenic provinces. *AusGeo News* 79, September 2005. [www.ga.gov.au/image\\_cache/GA7184.pdf](http://www.ga.gov.au/image_cache/GA7184.pdf)
- 'Platinum-group-element mineralisation in Australian Precambrian layered mafic-ultramafic intrusions', by Hoatson, 1998. Special Issue of AGSO Journal, 17(4), 139–151.



### Arunta Province—Proterozoic mafic-ultramafic intrusions

- 'Proterozoic mafic-ultramafic intrusions in the Arunta Region, central Australia. Part 1: Geological setting and mineral potential', by Hoatson, Sun & Claoué-Long, 2005. Precambrian Research, 142, 93–133.
- 'Proterozoic mafic-ultramafic intrusions in the Arunta Region, central Australia. Part 2: Event chronology and regional correlations', by Claoué-Long & Hoatson, 2005. Precambrian Research, 142, 134–158.
- 'Geophysical interpretation of Proterozoic mafic-ultramafic intrusions in the Arunta Region, central Australia', by Meixner & Hoatson, 2004. Geoscience Australia Record 2003/29, 125 p. [www.ga.gov.au/about/corporate/ga\\_authors/record2003\\_29\\_toc.jsp](http://www.ga.gov.au/about/corporate/ga_authors/record2003_29_toc.jsp)
- 'Mineral potential modelling of Proterozoic mafic-ultramafic intrusions in the Arunta Region, central Australia', by Mieziitis, Jaireth & Hoatson, 2006. Geoscience Australia Record 2006/14, 56 p.
- 'Field investigations of Proterozoic mafic-ultramafic intrusions in the Arunta Province, central Australia', by Hoatson & Stewart, 2001. Geoscience Australia Record 2001/39, 87 p. [www.ga.gov.au/image\\_cache/GA5868.pdf](http://www.ga.gov.au/image_cache/GA5868.pdf)

### Gawler Craton—Archean Lake Harris Komatiite

- 'Late Archean Lake Harris Komatiite, central Gawler Craton, South Australia: geologic setting and geochemistry', by Hoatson et al., 2005. Economic Geology, 100, 349–374.

### East Kimberleys and Pilbara Craton—Precambrian layered mafic-ultramafic intrusions

- 'Geology and economic potential of the Palaeoproterozoic layered mafic-ultramafic intrusions in the East Kimberley, Western Australia', by Hoatson et al., 2000. Australian Geological Survey Organisation Bulletin 246, 476 p.
- 'Petrology and platinum-group-element geochemistry of Archean layered mafic-ultramafic intrusions, west Pilbara Block, Western Australia', by Hoatson et al., 1992. Australian Geological Survey Organisation Bulletin 242, 320 p.
- 'Archean layered mafic-ultramafic intrusions in the west Pilbara Craton, Western Australia: a synthesis of some of the oldest orthomagmatic mineralizing systems in the world', by Hoatson & Sun, 2002. Economic Geology, 97, 847–872.

Panton layered mafic-ultramafic intrusion, East Kimberleys  
(photograph by Ian Oswald-Jacobs).

## MAPS, PRESENTATIONS, DATASETS

- *'Australian Proterozoic Mafic-Ultramafic Magmatic Events: Sheets 1 & 2'*. Map summarising the major Proterozoic mafic±ultramafic magmatic and mineralising events in Australia.

Sheet 1

[www.ga.gov.au/image\\_cache/GA11507.pdf](http://www.ga.gov.au/image_cache/GA11507.pdf)

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Sheet 2

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[www.ga.gov.au/image\\_cache/GA11510.jpg](http://www.ga.gov.au/image_cache/GA11510.jpg)

- *'A Synthesis of Australian Proterozoic Mafic-Ultramafic Magmatic Events. Part 2: Northern Territory and South Australia'*. Map summarising the major Proterozoic mafic±ultramafic magmatic and mineralising events in the Northern Territory and South Australia.  
[www.ga.gov.au/image\\_cache/GA10636.pdf](http://www.ga.gov.au/image_cache/GA10636.pdf)  
[www.ga.gov.au/image\\_cache/GA10645.jpg](http://www.ga.gov.au/image_cache/GA10645.jpg)
- *'A Synthesis of Australian Proterozoic Mafic-Ultramafic Magmatic Events. Part 1: Western Australia'*. Map summarising the major Proterozoic mafic±ultramafic magmatic and mineralising events in Western Australia.  
[www.ga.gov.au/image\\_cache/GA8798.pdf](http://www.ga.gov.au/image_cache/GA8798.pdf)  
[www.ga.gov.au/image\\_cache/GA8797.jpg](http://www.ga.gov.au/image_cache/GA8797.jpg)
- *'Web-based mapping of Australia's nickel sulphide metallogenic provinces: resources and potential'*. Poster presented at the Society of Economic Geologists (SEG) 2004: Predictive Mineral Discover Under Cover Conference, Perth, September 2004. [www.ga.gov.au/image\\_cache/GA5478.pdf](http://www.ga.gov.au/image_cache/GA5478.pdf)
- *'Australian Nickel Resources Map'*, 1:10,000,000 scale, March 2008. [www.ga.gov.au/image\\_cache/GA11453.pdf](http://www.ga.gov.au/image_cache/GA11453.pdf)
- *'Australian Nickel Deposits, Occurrences, and Potential Map'*, 1:5,000,000 scale, February 2005.  
[www.ga.gov.au/image\\_cache/GA6080.pdf](http://www.ga.gov.au/image_cache/GA6080.pdf)
- *'Geophysical Interpretation: Harris Greenstone Belt, Gawler Craton, South Australia Map'*, 1:250,000 scale, September 2002. Preliminary interpretation of the Precambrian basement geology of the Harris Greenstone Belt based on aeromagnetics, gravity, and diamond drilling.  
[www.ga.gov.au/image\\_cache/GA4119.pdf](http://www.ga.gov.au/image_cache/GA4119.pdf)
- *'Proterozoic Mafic-Ultramafic Magmatic Events in the Northern Territory & South Australia: Implications for Nickel-PGE Mineralisation'*. Keynote address at the Australian Nickel Conference, Perth, 24-25 October 2007. [www.ga.gov.au/minerals/research/pubs/presentations/aus\\_ni\\_conf\\_2007.jsp](http://www.ga.gov.au/minerals/research/pubs/presentations/aus_ni_conf_2007.jsp)
- *'Proterozoic Mafic-Ultramafic Magmatic Events: Implications for Nickel Mineralisation'*. Keynote address at the Australian Nickel Conference, Perth, 18-19 October 2006.  
[www.ga.gov.au/minerals/research/pubs/presentations/MUM\\_ni\\_mineralisation.jsp](http://www.ga.gov.au/minerals/research/pubs/presentations/MUM_ni_mineralisation.jsp)
- *'Nickel sulphide deposits in Australia: Challenges and new opportunities'*. Keynote address at the Australian Nickel Conference, Perth, 19-20 October 2005. [www.ga.gov.au/minerals/research/pubs/presentations/aus\\_ni\\_conf\\_2005.jsp](http://www.ga.gov.au/minerals/research/pubs/presentations/aus_ni_conf_2005.jsp)
- *'Australia's Nickel Sulphide Deposits: Characteristics and New Ideas for Discovery'*. Keynote address at the Australian Nickel



McIntosh layered mafic intrusion, East Kimberleys (photograph by Ian Oswald-Jacobs).

- Conference, Perth, 13-14 October 2004. [www.ga.gov.au/minerals/research/pubs/presentations/aus\\_ni\\_conf.jsp](http://www.ga.gov.au/minerals/research/pubs/presentations/aus_ni_conf.jsp)
- *'Nickel Sulphide Deposits in Australia: Resources and Potential'*. Presentation at the Prospectors and Developers Association of Canada (PDAC) convention, Toronto, Canada, 7-10 March 2004. [www.ga.gov.au/minerals/research/pubs/presentations/hoatson\\_pdac2004.jsp](http://www.ga.gov.au/minerals/research/pubs/presentations/hoatson_pdac2004.jsp)
- *'Harris Greenstone Belt-Geophysical Interpretation of Basement Geology'*. GIS package containing geological and geophysical layers with map-making function, May 2003. [www.ga.gov.au/map/gawler\\_harris/](http://www.ga.gov.au/map/gawler_harris/)
- *'Australian Mines Atlas'*. Information on Australian minerals and energy deposits, mines and processing centres, including map-making function. [www.australianminesatlas.gov.au](http://www.australianminesatlas.gov.au)
- *'GADDS'*. Magnetic, radiometric, gravity, and elevation data in grid and vector formats from national and State/NT archives. [www.geoscience.gov.au/gadds](http://www.geoscience.gov.au/gadds)
- *'Geoscience Portal'*. A web-portal that provides access to geoscience information from the Australian, State, and Northern Territory governments. [www.geoscience.gov.au/](http://www.geoscience.gov.au/)
- *'Download Free Datasets'*. A search tool to discover all Geoscience Australia's products and datasets that are free to download. [www.ga.gov.au/products/](http://www.ga.gov.au/products/)

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