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ontheoutcrop is a Geological Survey of New South Wales (GSNSW) e-newsletter. For more information about newsletter items go to: <http://www.dpi.nsw.gov.au/minerals/geological>

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UPCOMING EVENTS

Mining NSW Conference, 30–31 August 2011, Orange

[Mining NSW Conference 2011](#) brings senior decision makers from all sectors of the resources industry to discuss the outlook for Australia's second largest gold producing region. Conference chair is Dr Phillip Blevin, Team Leader Minerals from GSNSW.

Mining 2011 Resources Convention, 26–28 October 2011, Brisbane

[Mining 2011 Resources Convention](#) will cover topics such as metals outlook, funds management, international outlook, exploration in Australia and junior company presentations

China Mining, 6–8 November 2011, Tianjin, China

[China Mining Congress & Expo](#) has evolved into an influential mineral exploration/extraction trade event and brings together top policy makers and leading industry figures. This year's theme is: The World and China in Mining Consolidation: Co-operation, Responsibility and Development.

NEW PRODUCTS AND SERVICES

Free map GIS data and image downloads available on-line

The GIS data and images of published maps can be downloaded from the [Minerals & Petroleum website](#). Click on [Geoscience Product Catalogue](#) in the left hand column and follow the links to the required map.

Download formats include JPEG, ECW, ESRI shapefiles and MapInfo tables.

New viewing feature in the on-line map catalogue

The on-line [Geoscience Products Catalogue](#) has a new Google Maps and Google Earth service to supplement the recently developed map downloads service. Users are able to view a georectified image of a hard copy map in a Google Maps or Google Earth browser and use the transparency button to match the geology to corresponding topographical features. The links are available on the product page for each map.

Contact: geoscience.products@industry.nsw.gov.au



Resources
& Energy

New 1:1 500 000 metallogenic map of NSW

The ground-breaking [1:1 500 000 State Metallogenic Map](#) shows the distribution of major NSW mineral districts with selected deposits as key mineral systems identified in the new [mineral systems classification](#) scheme, and gives an overview of commodities and prospective areas of NSW. It is available in flat or folded formats for \$19.80.

Contact: geoscience.products@industry.nsw.gov.au

Six new 1:100 000 Koonenberry geological maps

Six new 1:100 000 Koonenberry Belt geological maps - the Yantara, Yancannia, Mount Arrowsmith, Cobham Lake, Olive Downs and Milparinka sheets - are available in flat or folded formats on tear-resistant synthetic paper and cost \$19.80 each. Alternatively, go on-line to [geological maps](#) for free downloads.

Contact: geoscience.products@industry.nsw.gov.au

Updated 1:3 000 000 Mineral Resource Projects map

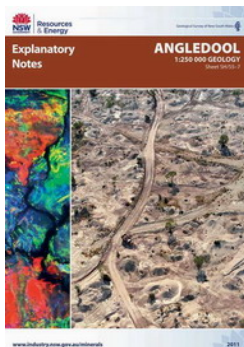
The free 1:3 000 000 [Mineral Resource Projects map](#) has been reprinted to meet demand. It features updated mineral resources.

Contact: geoscience.products@industry.nsw.gov.au

July updates for mineral and petroleum projects and exploration highlights maps

Advanced Mineral Projects & Exploration Highlights and the Petroleum Projects & Exploration Highlights maps were updated in July 2011. Digital versions of the [project maps](#) are available on-line.

New Angledool 1:250 000 geological map and explanatory notes published



The [Angledool 1:250 000 geological map and explanatory notes](#) have been released and they are available for \$19.80 and \$30 respectively. [The Angledool map](#) features a full colour poster on the reverse side which includes general or educational information about the Lightning Ridge opal fields and the opals from the region.

Contact: geoscience.products@industry.nsw.gov.au

Quarterly Note 135 — Phoenix: an Early Devonian granite-related tungsten deposit from the eastern Lachlan Orogen, New South Wales

The dating studies for mineralisation at Phoenix in [Quarterly Note 135](#), broaden the impact of the early Devonian thermal and metallogenic event in the Eastern Subprovince of the Lachlan Orogen. In addition, the identification of several metallogenic events associated with plutons of the Wyangala Batholith highlights the mineral potential of that terrane and encourages further exploration for a range of commodities.

Contact: Peter Downes, Senior Geoscientist, minsyst.info@industry.nsw.gov.au, 02 4931 6708

Quarterly Note 136 — Fossil microbes in opal from Lightning Ridge : implications for the formation of opal

[Quarterly Note 136](#) is a study of the fossil microbe communities in the opal and host rock at Lightning Ridge and discusses their role in the formation of precious opal.

Milparinka and Cobham Lake 1:250 000 geophysical–geological interpretation map notes

The [geophysical–geological interpretation map notes for the 1:250 000 Milparinka and Cobham Lake map sheet areas](#) in the far northwestern part of New South Wales were released in June. The notes are available in [DIGS](#) as report number GS2011/0790.

Contact: Rosemary Hegarty, Senior Geoscientist: regional.mapping@industry.nsw.gov.au, 4931 6597

NSW results available from National Geochemical Survey

The [National Geochemical Survey of Australia results for NSW](#) were released at the 'Exploration in the House' seminar in June. The National Geochemical Survey of Australia is part of a project managed by Geoscience Australia to provide baseline geochemical sampling over large areas. Sampling was conducted throughout the WLA in 2009. The geochemical atlas, data and reports are now available for free download from the [Geoscience Australia website](#).

A cluster of elevated metal values were identified near Walgett, northern NSW and will require further data analysis and interpretation. The preliminary NSW report is available in [DIGS](#) as report number GS2011/0801.

Contact: John Greenfield, Team Leader, regional.mapping@industry.nsw.gov.au 02 4931 6728

Synthesis of GSNSW data delivery services

[A synthesis of on-line services provided by the GSNSW and how it is improving its data delivery](#) to the community is available on-line from the '[Exploration in the House](#)' [technical talks](#) held in June 2011.

Earth science careers promotion through GSNSW web pages

New web pages under [Geoscience Information services](#) offer links to [careers sites and sources for educational materials](#).

On-line list of papers published in external journals 2010–2011

A [list of scientific papers published by GSNSW staff in external journals for 2010–2011](#) is available on-line

TAKE NOTE!

New printed map pricing

Map prices were changed as of 1 July 2011. Printed maps on non-folding templates (generally post 2005) have increased in price from \$11.00 to \$19.80 including GST. Earlier printed maps remain at \$11.00. Print-on-demand hard copy prices have increased from \$33.00 to \$66.00 for provisional maps, large format prints and for out-of-print maps.

PROJECT HIGHLIGHTS

Grafton–Tenterfield airborne geophysical survey

The Grafton–Tenterfield airborne geophysical survey in the far northeast of NSW has acquired 40% of the targeted 100 000 line km of data.

Contact: Dave Robson, Chief Geophysicist: regional.mapping@industry.nsw.gov.au, 02 4931 6717

Metallogenic Map of NSW project

The recently released [1:1 500 000 Metallogenic Map of NSW](#) is the first of a series of statewide and regional scale maps being developed by the Mineral Systems (MinSysNSW) team under the [Mineral Systems of NSW project](#). The map classifies the largest metal accumulations in NSW according to deposit type, contained commodities and relative size. The project will help to target individual deposit types and districts for more detailed studies.

Contact: Mineral Systems Group at minsysteam@industry.nsw.gov.au, 02 4931 6714

Cobar Hydrogeochemistry study

The GSNSW, in conjunction with CSIRO, has also conducted a pilot hydrogeochemical study in the Cobar region. The aim of the project was to sample groundwater in the Cobar region to test whether nearby mineralisation could be detected. 31 water samples have been collected and analysed from bore holes around Bulla Park, Cuttaburra, and Louth (Figure 1). Three groundwater aquifers were identified amongst the samples, and initial results indicate tungsten and platinum anomalies, however not the Cu-Zn anomalies that were expected. The pilot study has shown there is potential for hydrogeochemistry studies in future to aid exploration under cover, and if there is enough explorer interest then a sampling program will be proposed in the Thomson region.

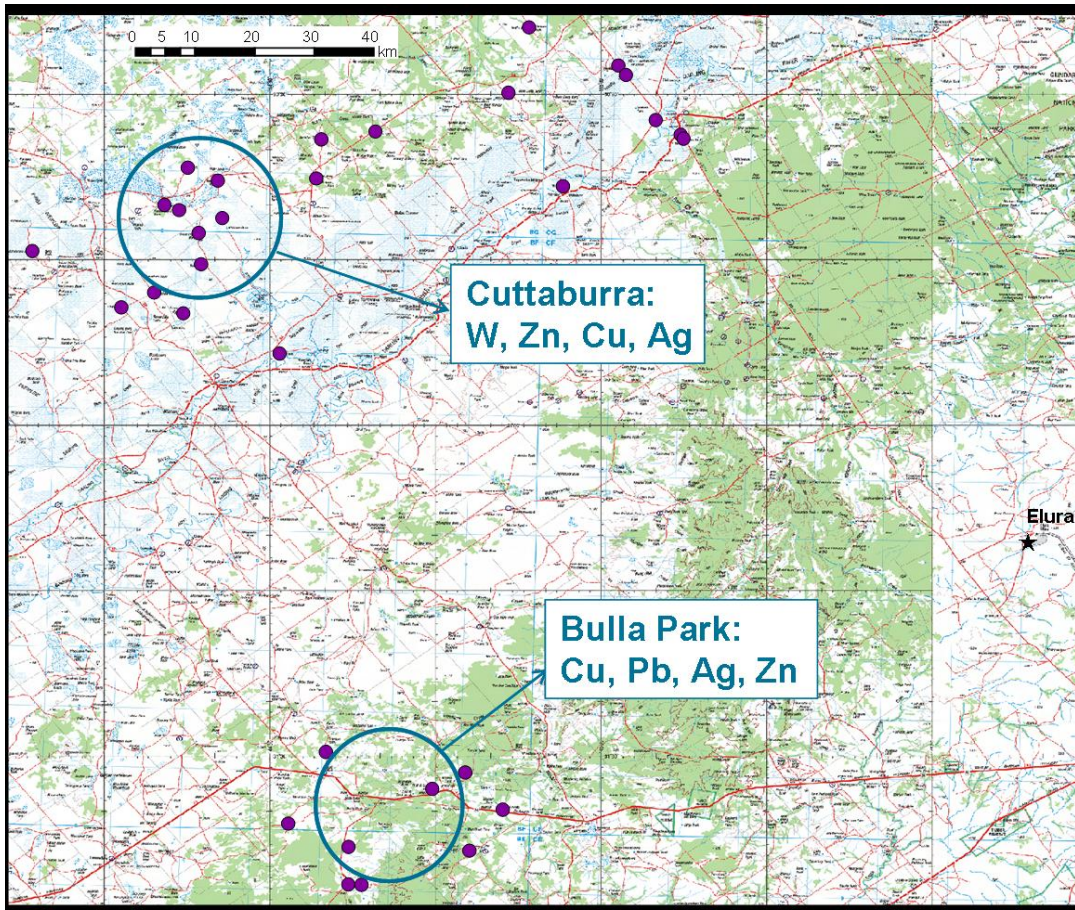


Figure 1. Cobar Hydrogeochemistry Pilot Study waterbore sample sites.

Contact: John Greenfield, Team Leader, regional.mapping@industry.nsw.gov.au 02 4931 6728

RECENT EVENTS

Resources & Energy Symposium, 23 May 2011, Broken Hill

The GSNSW and Trade & Investment (formerly State & Regional Development) successfully combined forces to promote NSW mining and investment at the [Resources & Energy Symposium](#). Graham Butt, GSNSW, gave a wide ranging talk on the benefits of investing in mining in NSW. He presented examples of successful mining projects and demonstrated the support the NSW government provided through Resources & Energy services and products. Trade & Investment continued the thrust of the talk by providing business advice and information on NSW infrastructure to prospective investors and existing companies.

Exploration in the House, 8 June 2011, Parliament House Theatre, Sydney

The '[Exploration in the House](#)' technical talks are available on-line under [Geological Survey News](#).

7th National Opal Symposium, 25–27 July 2011, Lightning Ridge

GSNSW staff presented talks on opal and the geology, geophysics and geodiversity of the Lightning Ridge area, and launched the 1:250 000 Angledool geological map and explanatory notes. The GSNSW, Mine Safety, and the Environmental Sustainability Unit promoted their work at a booth at the symposium.

Mineral Exploration & Investment Conference, 18–19 August 2011, Sydney

The conference was presented by Resources & Energy NSW and featured the latest information on exploration initiatives, coal seam methane gas development, project development and investment opportunities. John Greenfield (GSNSW) presented on the importance of mapping to exploration and land use planning and Phil Blevin (GSNSW) spoke on the opportunities for rare earth elements and strategic metals in NSW.

STAFF MOVEMENTS

Iain Paterson has retired from his position of Team Leader, Land Use Assessment after 42 years with the GSNSW

Harvey Henley has retired from his position of Senior Geologist, Mineral Exploration Assessment after 30 years with the GSNSW

Colin Wood has resigned from his position of Principal Geologist, Mineral Exploration Assessment

Owen Thomas has resigned from his position of Senior Geologist, Regional Mapping.

Paul Flitcroft has resigned from his position Technical Officer, Regional Mapping

David Forster has accepted the position of Senior Geologist, Industrial Minerals

Simon Francis has accepted the position of Senior Geologist, Land Use Assessment

Phil Blevin has accepted the position of Team Leader, Minerals

Ian Clarke has accepted the position of Principal Geologist, Mineral Exploration Assessment

PRODUCTS AND ENQUIRIES

Internet product catalogue

The online [Geoscience Products Catalogue](#) includes over 240 hard copy maps and over 70 geoscience data packages (including geophysical data) on CD or DVD ROM.

Enquiries about purchasing products

Maps and data packages: geoscience.products@industry.nsw.gov.au: Tel: 02 4931 6503

Geophysical images and data: geophysics.products@industry.nsw.gov.au: Tel: 02 4931 6717

Counter sales: mineralpublication.orders@industry.nsw.gov.au Free call: 1300 736 122 Tel: 02 4931 6666

Online sales: <http://www.shop.nsw.gov.au/>

General enquiries about products and services

Contact: Michael Hallett, michael.hallett@industry.nsw.gov.au: Tel: 02 4931 6724

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