



ISSUE 21 MAY 2014

## New Frontiers Cooperative Drilling — invitation to apply

The NSW Government is calling for applications under an [Invitation to Apply](#) for funds through the New Frontiers Cooperative Drilling program. This NSW Government initiative will provide grants to exploration companies to assist drilling programs for Group 1 minerals.

The closing date for applications is 5.00 pm 30<sup>th</sup> May. [View the full time frame for applications.](#)

**Contact:** Mike Hallett, Executive Officer, [cooperative.drilling@industry.nsw.gov.au](mailto:cooperative.drilling@industry.nsw.gov.au), 02 4931 6724

## New Director of the Geological Survey

Dr John Greenfield has been appointed Director, Geological Survey of NSW (GSNSW). John joined the GSNSW in 2004 as a regional mapper. He managed the regional mapping project in the Koonenberry Belt, a CRCLEME project in the Thomson Orogen and was the first project manager of the COGENT II corporate database program. Prior to this, he did mapping in east Antarctica, central Australia and central Yilgarn and worked on modern seabed ore systems in Indonesia, Pb–Zn–Ag deposits at Broken Hill and orogenic gold targets in Venezuela.

[Read more](#)

## Second edition Bathurst 1:250 000 metallogenic map

The [Bathurst 1:250 000 Metallogenic Map](#) 2nd Edition was launched at the Australian Fossil and Mineral Museum in Bathurst on 29 March 2014 by Paul Toole MP, State Member for Bathurst. The map shows historical and current mineral deposits classified using terms in the Minerals Systems of NSW schema. A time–space plot shows major mineralising events with the dominant commodity(s). The base geology has been simplified and updated using new mapping and geophysics. Details are described in the report [GS2013/1609](#) in DIGS®.

The back of the map illustrates the mining and geological history of the region. The map is available as a free download or in hardcopy.

**Contact:** [geoscience.products@trade.nsw.gov.au](mailto:geoscience.products@trade.nsw.gov.au)

## Exploration in the House, 20 May, Parliament House Theatre, Sydney

[EITH2014](#) will present the latest GSNSW studies and include updates on the Thomson Orogen,

statewide seamless geology, metallogenic mapping, Hylogger™, Cobar–Nymagee project and data delivery projects. The latest technical publications will be on sale, alongside a comprehensive map and poster display.

[Program and registration forms](#) are available now online.

**Contact:** [geosurvey.events@industry.nsw.gov.au](mailto:geosurvey.events@industry.nsw.gov.au), 02 4931 6714

## NSW Minerals Council Exploration Forum 21 May, MLC Centre, Sydney

GSNSW and the NSW Minerals Council are coordinating the *Beyond the Rocks* Exploration Forum which will focus on new and emerging regulatory compliance, community engagement and environmental management. Speakers from government, industry and the community will present the latest information and discuss leading practices.

[Program and registration forms](#) are available now online, or see the newsletter attachment.

**Contact:** [geosurvey.events@industry.nsw.gov.au](mailto:geosurvey.events@industry.nsw.gov.au), 02 4931 6714

## New maps available at EITH 2014

A provisional **Warwick–Tweed Heads 1:250 000 Metallogenic Map 1st Edition** will be on display at Exploration in the House 2014.

**Contact:** Phil Blevin, [phil.blevin@trade.nsw.gov.au](mailto:phil.blevin@trade.nsw.gov.au), 02 4931 6585

The updated **Gosford–Lake Macquarie 1:100 000 Geological Map** will be available for viewing.

**Contact:** [geoscience.products@industry.nsw.gov.au](mailto:geoscience.products@industry.nsw.gov.au)

## Yathong Trough seismic survey data

The 235 km seismic survey over the Yathong Trough south of Cobar was completed in December 2013. The survey aims to provide subsurface information for petroleum and unconventional gas exploration, locate deeply buried granites that may be suited to geothermal energy generation and identify deep, saline reservoirs suitable for geological carbon dioxide storage.

Preliminary inspection of the 6 second data has delineated a 3D basinal feature that will assist drill-targeting. Both the 6 and 22 second data provide new structural information about the mineralised western edge of Mount Hope Trough. Geoscience Australia is processing all the data and will release the results in late 2014.

**Contact:** David Robson, Chief Geophysicist, [david.robson@trade.nsw.gov.au](mailto:david.robson@trade.nsw.gov.au), 02 4931 6717

## Thomson Orogen program aimed at deep drilling innovation

A three year project on the southern Thomson Orogen aims to acquire new geophysical and geochemical data that will assist in trialling innovative drilling systems developed by the Deep Exploration Technologies CRC. If trials are successful, drilling will become cheaper and faster for exploration companies searching for covered mineral deposits in new frontier areas like the Thomson Orogen.

Geoscience Australia, the [Deep Exploration Technologies CRC](#), and the geological surveys of New

South Wales and Queensland are collaborating in this project which forms part of the Australian Government's '[Unlocking Australia's Hidden Mineral Resource Potential](#)' program. GSNSW is conducting an airborne electromagnetic survey in April–May 2014 and ground-based surveys are planned for later in the year.

**Contact:** Rosemary Hegarty, [rosemary.hegarty@trade.nsw.gov.au](mailto:rosemary.hegarty@trade.nsw.gov.au), 02 4931 6597

## New Resources & Energy website

The Resources & Energy Division of NSW Trade & Investment has launched a new website at [www.resourcesandenergy.nsw.gov.au](http://www.resourcesandenergy.nsw.gov.au) which replaces [www.resources.nsw.gov.au](http://www.resources.nsw.gov.au).

The GSNSW webpages were migrated across to the new domain under [Miners & explorers](#), [Geoscience information](#). The GSNSW and Coal and Petroleum Geoscience exist as entities under this heading. The new URL for the Geological Survey of NSW and Coal and Petroleum Geoscience webpages is: <http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/geoscience-information>. The GSNSW webpage content remains the same but is formatted to a new template. The **Geoscience information** pages will be restructured and updated over the next few months to better fit the new structure. Pages such as '**Work programs**' are under construction.

The [new website for NSW Resources & Energy](#) encompasses content from all Mineral Resources business units. It is audience-based and content from the business units will appear under page headings which target specific audience groups. Information relating to Titles, Mine Safety, Environmental Sustainability, Coal Resource Assessment and Royalties can be found on webpages under [Miners & explorers](#).

Please update your bookmarks to favourite pages. [Read more about the changes](#).

**Contact:** Joan Henley, [joan.henley@trade.nsw.gov.au](mailto:joan.henley@trade.nsw.gov.au), 02 4931 6573

## Broken Hill rock collections

Two rock collections from the Broken Hill area are available for viewing at the [E.C. Andrews Drill Core Facility](#) at Broken Hill. One collection shows the distinctive rock types of each stratigraphic unit in the Willyama Supergroup (numbers 164–356). The other rock set was collected during the GSNSW Broken Hill Geological Mapping Program, 1970s–1980s (numbers 1–163). A collection of mineralised and related rocks from the contemporaneous Broken Hill Metallogenic Mapping project is also housed at the facility. The rocks are described in [Bulletin 32](#).

[Access to the core library and collections](#) can be arranged under the conditions set out at: <http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/geoscience-information/drill-core/e-c-andrews-drill-core-facility>.

The core library will open for Broken Hill Resources Investment Symposium delegates on Sunday 25th May, 12–4pm and Tuesday 28th May, 12.30–3.00pm.

**Contact:** Brian Casey, 0429 874 891 or the Broken Hill office: 08 8088 9300

## Geoscientific Data Warehouse (GDW) — linked to NSW Globe

The [GDW](#) now links to [NSW Globe](#) in Google Earth. NSW Globe is supplied by Land & Property Information (LPI). By combining data from the GSNSW and LPI in Google Earth, a user can view geology maps, airborne geophysical images and geoscientific data along with high quality satellite imagery, terrain data and land parcel information.



Example of GSNSW and LPI data viewed in Google Earth showing geology and land parcels near Mount Ainslie, Canberra

## List of bore core accepted at Mineral Resources core libraries

View a [list of non-confidential bore core](#) accepted at the [WB Clarke Geoscience Centre](#), Londonderry, June 2013 – March 2014. Included is bore core from the porphyry at Finns Crossing, Wellington. No core was accepted at the EC Andrews drill core facility, Broken Hill

**Contact:** Kevin Capnerhurst, Senior Geologist Databases,  
[kevin.capnerhurst@industry.nsw.gov.au](mailto:kevin.capnerhurst@industry.nsw.gov.au)

## Free NSW Explorers Directory 2014

The [NSW Explorers Directory 2014](#) showcases 126 exploration companies. It has information on current hot prospects, prospective ground, and active mines and developments. It contains data on geology, mineral occurrences, geophysics and exploration/mining titles.

## GSNSW contributes to Convict Trail Map

GSNSW contributed a geological cross-section to the [Great North Road – Convict Trail Map](#) published by Cartoscope Pty Ltd. The cross section shows the type of rocks that were excavated by convicts during the construction of the Great North Road which extends from north of Sydney to the Hunter Valley. The map can be seen online at: <http://www.maps.com.au/OnlineMaps/default.asp>

## Staff honours

Two recently recruited staff members have received university awards for their Honours degree studies.

**James Ballard**, GIS geoscientist in Geospatial Information, received the University Medal in Earth Sciences for his Bachelor of Science (Honours) at the University of Newcastle in 2013. He also received the Faculty Medal from the Faculty of Science and Information Technology for his First Class Honours studies in 2013.

**Mark Eastlake**, geoscientist with Regional Mapping & Exploration Geoscience, received the highest mark ever awarded to a First Class Honours student from the Department of Earth and Planetary Sciences, Macquarie University.

## GSNSW researcher on expedition to study evolution of island arcs

Dr Robert Musgrave, GSNSW senior research scientist, joined Expedition 350 which sailed to a series of outcropping volcanic islands due south of Tokyo in March. This is one of three [International Ocean Discovery Program expeditions](#) to the area for the purpose of examining the evolution of oceanic arcs and the genesis of continental crust. Expedition geoscientists will drill, date and chemically examine the crustal rocks of the rear arc system of the Izu–Bonin–Mariana volcanic chain on the Philippines plate. Dr Musgrave is using magneto-stratigraphy to date the sequence of rocks.

The drill site is near a porphyry copper and provides an analogue to the Macquarie Arc in NSW. Dr Musgrave's work will also have a bearing on the volcanic arc in the southeastern Thomson Orogen. Dr Musgrave is on the expedition as Honorary Associate of the University of Sydney.

## PDAC2014, 2–5 March Toronto Canada

NSW was represented at the Prospectors and Developers Association of Canada (PDAC) Convention by John Greenfield, Director and Trisha Moriarty, Acting Manager, Geoscience Information from the GSNSW. They promoted the diverse opportunities for greenfields exploration, good infrastructure and strong government geoscientific support that NSW offers explorers and investors. [Read more.](#)

## Upcoming conferences

[Exploration in the House, 20 May, Parliament House Theatre, Sydney](#)

[NSW Minerals Council Forum 21 May, Sydney](#)

[Resources Investment Symposium, 25–28 May, Broken Hill](#)

[Australian Earth Sciences Convention, 7–10 July, Newcastle](#)

## Staff movements

**James Ballard** commenced as Geoscientist, GIS, Geospatial Information

**Graham Butt** retired from the position of Manager, Geoscience Information

**Elizabeth Currey** commenced as Executive Assistant to the Director, Geological Survey

**Mark Eastlake** commenced as Geoscientist, Reg Mapping & Exploration Geoscience

**Joel Fitzherbert** has accepted the position of Senior Geoscientist, Metallogenic  
**Kyle Hughes** commenced as Geoscientist, Reg Mapping & Exploration Geoscience  
**John Greenfield** accepted the position of Director, Geological Survey of NSW  
**Kate Holdsworth** commenced as Geospatial Officer, Geospatial Information  
**Hannah Lane** commenced as Geoscientist, Mineral Exploration Assessment  
**Glen Phillips** has accepted the position of Geoscientist, Statewide  
**Mark Ryland** commenced as Technical Officer, Core Libraries  
**Stewart Watson** commenced as Geospatial Information Officer  
**Bronwyn Witham** commenced as Professional Officer with Geoscience Databases

## Products

[Geoscience Product Catalogue](#)

[Geophysical images and data](#)

[Online sales: www.shop.nsw.gov.au](http://www.shop.nsw.gov.au)

[Quarterly Notes](#)

## Enquiries

**Maps and data packages:** [geoscience.products@trade.nsw.gov.au](mailto:geoscience.products@trade.nsw.gov.au)

**Geophysical images and data:** [geophysics.products@trade.nsw.gov.au](mailto:geophysics.products@trade.nsw.gov.au): Tel: 02 4931 6717

**Counter sales:** [mineralpublication.orders@trade.nsw.gov.au](mailto:mineralpublication.orders@trade.nsw.gov.au) Free call: 1300 736 122 Tel:  
02 4931 6666

**General product enquiries:** Gavin Ayre, [gavin.ayre@trade.nsw.gov.au](mailto:gavin.ayre@trade.nsw.gov.au), 02 4931 6426

## Contacts

**Email:** [geoscience.info@trade.nsw.gov.au](mailto:geoscience.info@trade.nsw.gov.au)

**Web:** [www.resourcesandenergy.nsw.gov.au](http://www.resourcesandenergy.nsw.gov.au)

**GSNSW:** [www.resourcesandenergy.nsw.gov.au/miners-and-explorers/geoscience-information](http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/geoscience-information)

**Newsletter compilation:** Joan Henley, [outcrop.newsletter@trade.nsw.gov.au](mailto:outcrop.newsletter@trade.nsw.gov.au)

**View previous issues:** <http://www.resourcesandenergy.nsw.gov.au/about-us/publications/on-the-outcrop>

**Visit the [Geoscience information webpages](#)** where you will find access to online systems DIGS<sup>®</sup>, MinView, EROL, GDW and GPC, upcoming GSNSW and Coal and Petroleum Geoscience events, news, publications and product information.

**To subscribe to Quarterly Notes:** Simone Meakin, [simone.meakin@trade.nsw.gov.au](mailto:simone.meakin@trade.nsw.gov.au)

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# exploration inthehouse2014

## DAY 1: EXPLORATION IN THE HOUSE

TUESDAY 20 MAY 2014  
PARLIAMENT HOUSE THEATRETTE  
MACQUARIE STREET, SYDNEY

### TALKS BY THE GEOLOGICAL SURVEY OF NEW SOUTH WALES, NSW TRADE & INVESTMENT:

- 1:00 PM** Welcome by Brad Mullard, Executive Director, Mineral Resources  
Opening by the Hon. Anthony Roberts MP, Minister for Resources and Energy
- 1:15 PM** Overview and strategic directions of the Geological Survey of NSW — *John Greenfield*
- 1:30 PM** Developments in mineral system studies at the Geological Survey of NSW — *Peter Downes*
- 1:45 PM** Layers upon layers of data: towards a seamless database for NSW — *Glen Phillips*
- 2:00 PM** An overview of 3D geological modelling in NSW: progress and objectives of statewide coverage — *Jamie Robinson*
- 2:15 PM** Afternoon tea
- 3:00 PM** Regional mapping overview: completed and new projects — *Phil Gilmore*
- 3:15 PM** Failed granites spread far and wide: implications from high precision dating in the New England Orogen — *Phil Blevin*
- 3:30 PM** Hylogger™ results of the Nymagee Mineral Systems Project — *David Tilley*
- 3:45 PM** Southern Thomson Orogen Project: collaboration along the Qld–NSW border — *Rosemary Hegarty*
- 4:00 PM** Geoscience Information: discovering our data — *Trisha Moriarty*
- 4:20 PM** Poster viewing and light refreshments
- 6:45 PM** Meal at Thai on 1  
NSW Leagues Club, 165 Phillip St, Sydney



## NSW MINERALS COUNCIL EXPLORATION FORUM 2014

## DAY 2: BEYOND THE ROCKS EXPLORATION FORUM — COMPLIANCE, COMMUNITY AND ENVIRONMENT

WEDNESDAY 21 MAY 2014  
LEVEL 47, MLC CENTRE, MARTIN PLACE, SYDNEY

- 9:00 AM** Welcome by Lucy McClean, NSW Minerals Council  
Opening by Stephen Galilee, CEO
- 9:20 AM** Rebuilding the economy: role of the resources and energy sector — *Kylie Hargreaves, Deputy Director General Resources & Energy, NSW Trade & Investment*
- 9:50 AM** Common Ground: a new approach to providing information services to the community — *Guy Fleming, Geological Survey of NSW*
- 10:20 AM** How Mineral Resources Branch is working for you — *William Hughes, Director Minerals Operations, and Steve Barry, A/Director Environmental Sustainability Unit, NSW Trade & Investment*
- 11:00 AM** Morning tea
- 11:30 AM** Keynote speaker — *Jock Laurie, NSW Land and Water Commissioner, NSW Trade & Investment*
- 12:15 PM** Changing the narrative with stakeholders before things get ugly! — *John Dengate, Director, Twyford*
- 1:00 PM** Best practice consultation with Aboriginal communities — *Clare McHugh, Director Policy and Research, NSW Aboriginal Land Council*
- 1:30 PM** Lunch
- 2:30 PM** The Hera Project: getting a mine started in NSW and what comes next — *Rimas Kairaitis, Managing Director, YTC Resources*
- 3:00 PM** The Cowal Gold Mine: achieving broad community support in a difficult environment — *Shane Goodwin, Community Relations Manager, Cowal Gold Mine*
- 3:30 PM** Bias: impacts on our decision making — *Simon Corcoran, Partner, A Human Agency*
- 4:00 PM** Afternoon tea

Note: times subject to change.

These events will give an insight into the latest geological information and new and emerging regulatory compliance, environment and community issues in New South Wales.

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