

This **CRC LEME and GSWA technical presentation** is to convey to mineral explorers the results of recent research and advances. The program is both retrospective and forward looking. It comprises previously released material and strategic research in progress.

**LEME's** role is to apply regolith science to the problems facing Australia in the areas of mineral and natural resource management. It addresses the challenges of mineral exploration in areas of transported regolith, undertaking and developing a wide range of integrated projects that use multi-disciplinary approaches to look at three-dimensional architecture of the regolith. The projects focus on the time-dependent physical, chemical, biological and hydrological processes that control geochemical dispersion of minerals in the regolith.

For more information, please visit our website:  
<http://crlceme.org.au>

**R Dennis Gee,**  
 Chief Executive Officer, CRC LEME

**GSWA** aims to promote the mineral prospectivity of Western Australia by the provision of spatially related geoscience information and regional geological, geophysical, and geochemical maps and reports. GSWA's particular strength in regional mapping of Precambrian and Phanerozoic successions is complemented by expertise in several other areas, including geochemistry and regolith studies.

Further information, interactive maps, and a compilation of downloadable products, is available from our website,  
<http://www.doir.wa.gov.au/GSWA>

**Tim Griffin,**  
 Director, Geological Survey of Western Australia

Convenors **Ravi Anand,** Program Leader  
 Mineral Exploration in areas of cover  
 CRC LEME  
[ravi.anand@csiro.au](mailto:ravi.anand@csiro.au)

**Paul Morris,** Chief Geochemist  
 Geological Survey of WA  
[paul.morris@doir.wa.gov.au](mailto:paul.morris@doir.wa.gov.au)



**CRC LEME** is an unincorporated joint venture between eight Core Parties:

- Australian National University,
- Curtin University of Technology,
- University of Adelaide,
- CSIRO Exploration & Mining and Land & Water,
- Geoscience Australia,
- Minerals Council of Australia,
- NSW Department of Primary Industries, and
- Primary Industry and Resources South Australia,

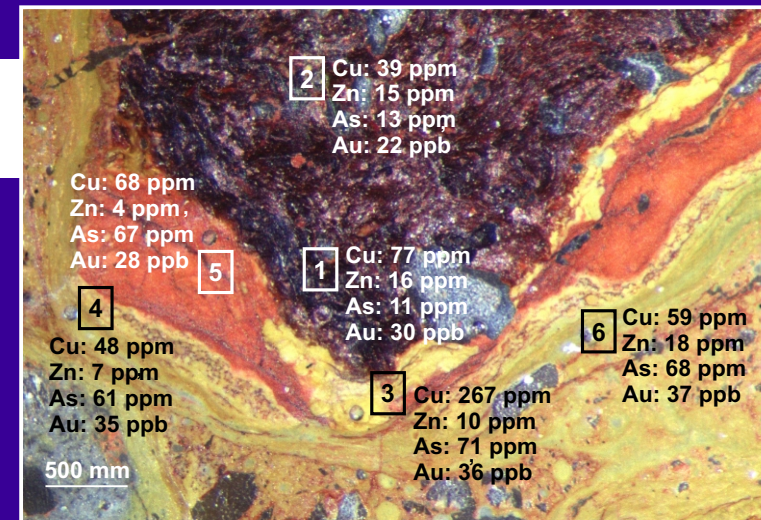
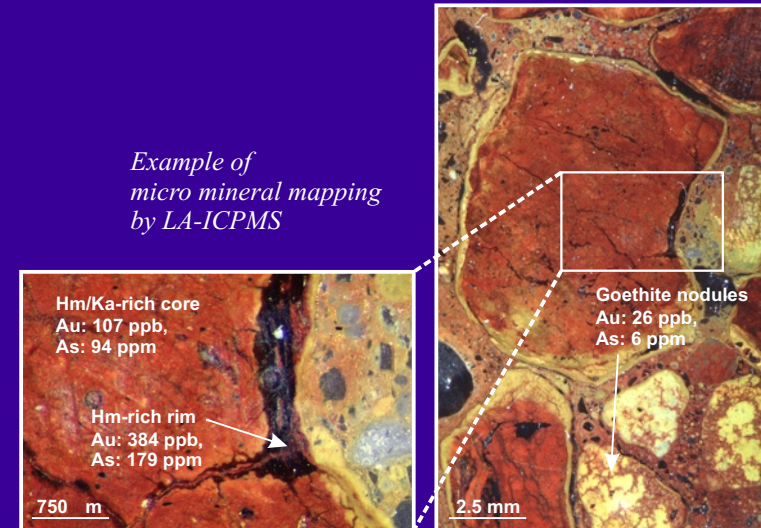
established and supported under the Australian Government's Cooperative Research Centres Program

# MINERALS EXPLORATION SEMINAR

14 - 16 February 2005

WA School of Mines, WMC Conference Centre  
 44 MacDonald St, Kalgoorlie

Example of micro mineral mapping by LA-ICPMS



## PROGRAM

### Monday 14 February

- 5.00 pm Registration  
6.00 pm Light meal and drinks  
8.00 pm **50 years of geochemical exploration in the Goldfields**  
*A commemorative address by  
Richard Mazzucchelli, Butt Smith Medal winner*

### Tuesday 15 February

- 9.00 am *Advances in regolith research - a LEME perspective* ..... D Gee / R Anand  
9.20 am *Regolith geochronology and mineral exploration* ..... B Pillans  
9.45 am *Origin of Tertiary inset-valleys and their fill, Kalgoorlie, WA* ..... P DeBroekert  
10.10 pm *Regolith-landform mapping, Yilgarn Craton* ..... M Craig  
10.35 pm *Regolith-landform mapping of the Kalgoorlie-Kanowna area* ..... M Skwarnecki

#### 11.00 am Morning Tea

- 11.15 am *Regional laterite geochemistry of the central Yilgarn* ..... M Cornelius  
11.40 am *GSWA's regional regolith geochemistry program: an overview* ..... P Morris  
12.05 pm *Towards understanding the ferruginous component of the regolith* ..... K McQueen  
12.30 pm *Hyperspectral regolith and alteration mineral mapping: The Kalgoorlie-Kanowna 1:100 000 scale mapsheet* ..... T Cudahy  
12.55 pm *Automated regolith logging - A realistic proposition?* ..... T Munday

#### 1.20 pm Lunch

- 2.20 pm *Mineral mapping and spectral logging of the Gawler Craton* ..... A Mauger  
2.45 pm *Mineral mapping from bedrock to playa sediments: examples from St Ives* ..... D Gray  
3.10 pm *GSWA mapping of outcrop and bedrock geology* ..... B Groenewald

#### 3.35 pm Afternoon Tea

- 3.50 pm *Mechanisms of anomaly formation through transported regolith* ..... M Aspandiar  
4.15 pm *Do gold and pathfinders move through transported overburden?* ..... R Anand  
4.40 pm *Progress on anomaly formation in calcrete* ..... M Lintern

#### 5.05 pm Close

### Wednesday 16 February

- 8.30 am *Gold nuggets* ..... R Hough  
8.55 am *Developing heavy mineral exploration strategies* ..... M Paine  
9.20 am *Ni laterites* ..... C Butt  
9.45 am *Locating ore undercover using Locatore<sup>®</sup> and other geochemical techniques. Examples from Stawell, Victoria and Honeymoon, WA* ..... R Noble  
10.10 am *Vegetation and soil expression of base metal and gold mineralisation at selected sites, Yilgarn Craton* ..... R Anand

#### 10.35 am Morning Tea

- 10.50 am *Using regional- and local-scale biogeochemistry to either penetrate or amalgamate chemical signatures in transported regolith* ..... S Hill  
11.15 am *Role of biota in mineral transformations and transport* ..... S Rogers  
11.40 pm *Eocene chemical weathering in southeast Yilgarn Block* ..... L Worrall  
12.05 pm *Experimental methods in geochemistry and mobility of metals in the regolith* ..... B McPhail  
12.30 pm *Groundwater isotopic geochemistry* ..... P deCaritat

#### 1.00 pm Lunch

- 2.00 pm *Sub-audio magnetic (SAM) geophysical technology for mineral exploration and subsurface regolith mapping* ..... J Myers  
2.25 pm *Innovative geophysical techniques for mapping regolith* ..... A Kepic

#### 2.50 pm Afternoon Tea

- 3.05 pm *Industry case histories and discussion* ..... Industry Panel  
4.15 pm Close

## REGISTRATION FORM & TAX INVOICE CSIRO Exploration and Mining ABN 41 687 119 230

### CRC LEME & GSWA MINERAL EXPLORATION SEMINAR 14-16 February 2005

WA School of Mines, WMC Conference Centre  
44 MacDonald Street, Kalgoorlie

#### Delegate details

Name.....  
Position.....  
Organisation.....  
Address.....  
.....Postcode.....  
Phone..... Email.....

#### Registration Fee \$140.00 - includes GST

Includes light meal and drinks, and commemorative address evening 14 February, full day program 15 and 16 February - morning & afternoon teas and lunch and **Abstract Volume**

#### Payment Details

Cheques made payable to CSIRO Corporate Finance

Please debit my credit card to the value of \$140.00

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*NB: We cannot accept Diners Club or American Express*

Registrations preferred by 7 February 05

Please fax completed form to: 08 6436 8586  
or Post to: LEME-GSWA Minex Seminar  
Attention, Cheryl Harris CRC LEME  
PO Box 1130, Bentley WA 6102.  
Enquiries: Sue Game 08 6436 8695 (susan.game@csiro.au)  
Cheryl Harris 08 6436 8647 (cheryl.harris@csiro.au)