

Geo-soundings

NEWSLETTER - SEPTEMBER 2003

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JOURNAL PUBLICATIONS

Meyers, J., 2003, *Discovering manganese ore under cover using 'Hoistem'*: LEMENEWS, No.23, June 2003.

Norvill, M., 2003 International Geophysical Societies (Part 2): Preview, 105, 14-20.

CONFERENCES

Beckett, K., 2003, *Cost-effective airborne geophysics and landscape analysis: AEM, radiometrics, airborne magnetics*: Presented at the CRC LEME Salinity Science Forum, University of Adelaide, 21-22 July.

Beckett, K., 2003 *Airborne Geophysics applied to groundwater modelling*: Presented at the CRC LEME Salinity Science Forum, University of Adelaide, 21-22 July.

Kepic, A., 2003, *EKS and other joint projects with ANSTO*: Presented at the CRC LEME Salinity Science Forum, University of Adelaide, 21-22 July.

Meyers, J., 2003, *Geophysical applications for mapping alteration and weathering in Australia*: Presented at the Australian Institute of Geoscientists Conference on Vectors to Hydrothermal Mineralization, Perth Squadron Yacht Club (Inc), Nedlands, 22 August.

Wilkes, P., 2003, *Cost-effective airborne geophysics and landscape analysis: AEM, radiometrics, airborne magnetics*: Presented at the CRC LEME Salinity Science Forum, University of Adelaide, 21-22 July.

STUDENT RESEARCH PROJECTS

Jayson Meyers and **Kachen Neawsuparp** were in Thailand for the month of July to review Kachen's research project with his other supervisor in Thailand, and to visit his field area in northern Thailand.

Katchen and Jayson are working on an extensive helicopter magnetic and EM data set flown over the northern part of the Loei volcanic belt, which contains the Chatree Gold Mine to the South. They visited Chatree and a number of other mineral deposits and localities during their field excursion. In Bangkok, Jayson gave a seminar on the use of modern geophysics for

mineral exploration under regolith cover in Australia. A similar presentation was also given as part of a **two day regolith workshop at St. Ives Gold Mine in WA in June**.

CRC LEME Salinity Science Forum

Adelaide University hosted the **CRC LEME Salinity Science Forum on July 21st -22nd 2003**. The Department of Exploration Geophysics was represented by **Paul Wilkes, Anton Kepic** and **Kirsty Beckett**. The forum was designed as an information exchange for CRC LEME participants across Australia.

Attendees included delegates from all CRC LEME salinity nodes with special invitations extended to government departments external from LEME but tackling similar issues. Case studies were presented on current salinity and land management projects being conducted under the LEME umbrella. Anton Kepic presented the work of present and past honours students' projects on near surface geophysics technique with application for salinity and land management. Paul Wilkes and Kirsty Beckett presented **"Cost effective airborne geophysics techniques – radiometric and magnetic investigations"** incorporating work completed by past honours students and recent studies on the role of airborne magnetic and radiometrics in land management. Kirsty Beckett also presented her PhD proposal **"Airborne geophysics applied to groundwater modelling"**.

The forum was declared a success, with feedback and cross-pollination of ideas for future projects passed between LEMERs and invited guests. As an addition to the forum, a showcase of the results of new EM Flow processing as part of the South Australian Tintinara project was presented on July 23rd. Former Curtin University student Andrew Fitzpatrick, now based in CSIRO in Canberra, demonstrated the stunning new results and accuracy that can be achieved from airborne electromagnetics.

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Review of Salinity mapping methods in the Australian Context

The call for the submissions to the **Review of Salinity mapping methods in the Australian Context** by Environment Australia (EA) and Agriculture, Forestry and Fisheries Australia (AFFA) was responded to with great gusto from CRC LEME. As part of the CRC LEME submission team, **Paul Wilkes** and **Kirsty Beckett** reviewed the role of airborne magnetic and radiometrics in cost effective salinity mapping and hazard identification.

CSIRO Canberra, under team leader Ken Lawrie, added the electromagnetic review, including recently completed case studies using the upgraded EM flow processing system.

The submissions will be reviewed by EA and AFFA to establish an up-to-date position statement of the use, range and effectiveness of technologies for mapping salinity in Australia's landscapes. The review will report on the range of mapping technologies used to support salinity management and multi-scale decision-making. The report is designed to fulfil the needs of a range of potential investors in mapping, including catchment and regional natural resource managers, state, territory and Commonwealth government agencies, scientists, and vendors of mapping methods and systems. A draft of the report is expected by the end of 2003.

AWARDS/PRIZES/SCHOLARSHIPS

Damian Leslie's PhD thesis entitled "*A geophysical application of time reversal*" was officially approved on the 30th June by the University. We congratulate Damian on this achievement and wish him all the very best for his future career.

Damian and Ruiping Li received their awards at the Graduation Ceremony held on September 10. Their respective supervisors, Bruce Hartley and Norm Uren also attended.



AusIMM Prizes for Academic Excellence for 2002

Mr. Matthew Hope (Best 3rd Year Student)
and

Mr. Alan Nanini (Best 2nd Year Student)

Nomination to Vice-Chancellor's List, Semester 1, 2003

Mr. Owen Davis has been nominated for this award, after achieving excellent grades at the end of Semester 1 examinations. Only the top 1% of students are eligible to be nominated to join the VC List.

2003 PESA (WA) Postgraduate Scholarship Prize

PhD student **Gracjan Lambert** has been awarded this prize, valued at \$5,000. Presentation of the prize will be made at a PESA luncheon meeting and it is expected that Gracjan will give a presentation on the results of his research at a future meeting of the PESA group.

EXPOS

Geophysics has been very active attending careers expos, promoting geophysics as a career, all over the state. **Bunbury** (20 June) was the first of the season, where we had a fair bit of interest despite low attendance. **Geraldton** (24/25 July) followed with its first of these type of events in quite some time. Although the Expo was TAFE based, Exploration Geophysics made some good contacts. The **Burswood Expo** (1/2 August) was next with the sheer volume of students that attend ensuring the success of the event.

The **Curtin Open Day** (17 August) provided an excellent opportunity to show off our technology. Field exercises showing

the operation of Ground Probing RADAR and Seismic Refraction ran all day, with interactive displays demonstrated inside the venue. Many thanks go to all the volunteers who so willingly gave time for these events. The Department wishes to especially thank Dominic Howman for coordinating many of these events as well as attending and conducting the competitions and demonstrations.



STAFF MATTERS

Congratulations to Dominic Howman on his promotion

After a length reclassification process Mr. Dominic Howman received confirmation that his application for promotion has been successful. Dominic's new title is **Senior Technical Officer**. This is a well deserved reward and we congratulate Dominic on this achievement.

Farewell to Rhonda Green

On the 15th August, the Department farewelled a much admired member of staff - **Rhonda Green**. Rhonda has decided to 'retire' after being with the Department for 8 years and will be missed by all staff and students alike. She had worked for various other areas of Curtin University prior to her geophysics appointment.

Rhonda and her husband Les, are currently holidaying overseas for about 5 weeks, with some time being spent in the UK, with a quick trip to Paris squeezed in, followed by a longer visit to friends in Canada on their way back home. Rhonda plans to get involved in community activities and catch up with friends as well as take an active part in the preparation of her eldest son's (Scott) forthcoming wedding. Les will return to work for about 2 more years!

To celebrate Rhonda's retirement from the Department, several attended an informal lunch at the 'local Chinese' restaurant, where all feasted on a tasty banquet. We all wish Rhonda the very best for a happy, healthy and long retirement


