

Geo-soundings

NEWSLETTER - JUNE 2003

Editor: Mrs Rhonda Green
Curtin University of Technology
GPO Box U1987, Perth WA 6845

Prof John McDonald, Acting Head
Department of Exploration Geophysics

Enquiries: Tel (08) 9266 3408/3565
Fax (08) 9266 3407

Email enq@geophy.curtin.edu.au
www.geophysics.curtin.edu.au

EXPOS

The annual **Careers & Education Expo** was held this year in the Robinson Pavilion at the Claremont Showgrounds from 16-18 May. Thank you to Kirsty Beckett, Luke Brown, Nigel Cantwell, Liz Clydsdale, Dominic Howman, Tom Kearney, Gracjan Lambert, Jayson Meyers, Margarita Norvill and Justin Vermeulen who all helped on the ASEG booth. Thank you also to Brian Evans and Anton Kepic who helped on the Divisional section of the Curtin booth.

Dom Howman participated in a combined **Schools Career Evening** on 29 May held at Aquinas College and shared with Trinity/Mercedes/Santa Maria Colleges.

Margarita Norvill spent 16-20 June in Exmouth, Tom Price and Newman promoting Geophysics as a career at the **Inland Pilbara Expo**.

The **South West Careers Expo** was held this year on 20 June in the South West Sports Centre, Hay Park, Bunbury and was attended by Dominic Howman and Norm Uren.



Norm Uren advising students at the South West Careers Expo

Anton Kepic attended the **Biennial Goldfields Careers Expo** held in the Kalgoorlie Town Hall, Kalgoorlie on Thursday 26th June.

APPEA Schools Visits to ARRC

Dominic Howman, Anton Kepic, Margarita Norvill, Justin Vermeulen and Luke Brown all helped to show visiting schools around the Geophysics Facility in the ARRC Building. A tour of teaching rooms and laboratories was conducted and students took part in a seismic experiment.

Thank you to all helpers who took part in the above expos.

JOURNAL PUBLICATIONS

McKenna, J.J., Gurevich, B., Urosevic, M., and Evans, B.J., 2003, *Rock physics – application to geological storage of CO₂*: APPEA Journal, **43**, 567-576.

McKenna, J., Gurevich, B., Urosevic, M., and Evans, B., 2003, *Forward modelling the long-term seismic response to CO₂ storage in a saline aquifer*: Preview, **103**, 35-39.

CONFERENCES

Tobias Muller attended the 65th EAGE Conference & Exhibition held in Stavanger, Norway from 2-5 June and presented the following papers:

Gurevich, B., 2003, *A new model for fluid substitution in fractured reservoirs*. Presented at the Special Session "Best of ASEG".

Muller, T.M., and Shapiro, S.A., 2003, *Quantifying seismic scattering attenuation in the (Un-) saturated wavefield fluctuation regime*, 65th EAGE Conf. & Exh., P217.

SHORT COURSES

ASEG Multiple Elimination Work Shop

Bruce Hartley and **Boris Gurevich** gave presentations at the above Workshop held in the ARRC Building, Perth on 27-28 May.

CRC LEME/AMEC Minerals Exploration Symposium

Jayson Meyers presented results of the *Manganese Exploration Under Cover* project at the Symposium held on Wednesday 18 June in the ARRC Building, Perth.

STUDENTS

Congratulations are extended to the following PhD Graduates who have been awarded their doctorates during the last quarter:

- **Ruiping Li** – Thesis Title: *Inversion for the elastic parameters of layered transversely isotropic media*. Passed 28/4/03.
- **Mu Luo** – Thesis Title: *A multi-azimuthal technique for seismic P-wave fracture mapping*. Passed 15/5/003.

Nigel Cantwell spent time in the field collecting geophysical data over the Songvang gold discovery near Leinster. Preliminary results are very encouraging, and should lead to more discoveries in the area.

PRIZES/SCHOLARSHIPS

On 10 April 2003 **Prof Boris Gurevich** received the Division of Resources and Environment Dean's Award for Researcher of the Year 2002 for exemplary research performance.



Prof. Boris Gurevich (left), being presented with his award by Professor Graham Lodwick, Executive Dean, Division of Resources and Environment

Robert Galvin

- Awarded the Kenneth H. Crandall Memorial Grant by the American Association of Petroleum Geologists Foundation (AAPG) Grants-in-Aid Committee.

Kirsty Beckett

- Awarded a CUPS scholarship for the duration of her PhD program. Kirsty already has a CRCLEME PhD Scholarship which will be converted to a top-up scholarship with operating expenses.

PHYSICAL MODELLING LABORATORY

A PT chamber has been built which will enable geological models to be subjected to simulated reservoir conditions. A computer controlled ultra-sonic system will be mounted over and within the 'reservoir', will permit the recording of 3-D volumetric zero and variable offset seismic data. Signal frequencies as low as 2kHz, will, for the first time, bridge the gap between wire-line logging frequencies and ultrasonics. Time-lapse 3-D visualisation of reservoir variations will be produced in an automated and immediate fashion. The chamber can also be used to record VSP data, while transient changes in fluid injection and extraction; pressure and temperature are taking place.

An application has been made for a provisional patent for this unique facility.



Lowering the Chamber into the Temperature Controlled Tank



New Pressure Vessel System