

Geo-soundings

NEWSLETTER - MAY 1999

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APCRC WORKSHOP

The APCRC Workshop was held at Lorne, Victoria from 16-18 February 1999. A highlight of this workshop was a field trip in the Port Campbell area, the purpose of which was to visit classic depositional sequences at the outcrop, and compare them to well log and seismic information available from the subsurface of the adjacent Otway Basin.

Three staff and five students attended from this Department and Don Sherlock, one of our students, won First Prize for his poster entitled *Time-Lapse 3D Seismic with Analogue Sandbox Models*.

Presentations made at Lorne again revealed the diversity of research being carried out under the APCRC. Unfortunately the senior management of APCRC could not be at Lorne (in one case very briefly) so a useful sounding board was absent.

The absences were due to the fact that presentations for the broadening of the APCRC into the geological disposal of carbon dioxide were being made in Canberra at the same time as the Lorne workshop.

Unfortunately, broadening into this research area (in a program called GEODISC) was not approved for Commonwealth funding. However, industry remains supportive and it is expected that an entirely industry funded GEODISC Program will be launched on 1 July 1999.

FIELD TRIPS

First Year Field Trip

First year Geophysics students study Geophysics 101 amongst other subjects such as Physics, Geology and Mathematics. This introductory subject includes a field trip and visits to exploration companies.

On March 13/14 a party of 41 students and 10 staff members attended a field camp at Fairbridge Farm in Pinjarra. Once settled into quarters, students were split into groups to conduct field exercises in:

- seismic refraction
- Schlumberger DC resistivity sounding
- gravity profiling
- magnetic field mapping.

The day was concluded with a swim in the pool and a barbecue.

On Sunday, the party took a cut lunch and visited the Boddington Gold mine. They were given an excellent introduction by Graeme Reynolds, followed by a tour of the open cut operations. Students were able to get an excellent appreciation of underground structures over which geophysical surveys might be conducted.

The party arrived back at Bentley at 4.00pm to enable preparation for the following week's academic program. Follow up analysis of results was carried out at the next Geophysics 101 class.

Field Trip to Temora, NSW

Three Curtin mineral geophysics honours students, Ben Bartlett, Tim Dean and Tenille Scott, and supervisors Paul Wilkes and Tim Munday, headed for NSW straight after Easter for three weeks fieldwork in the Temora area as part of the Gilmore project. This is a large project coordinated by AGSO with involvement from CRC AMET and CRC LEME working on mineralisation and groundwater issues. The fieldwork included geophysical studies on palaeochannels, porphyry mineralisation and parna (windblown material thought to be associated with salinity). Don Hunter and Kristian Sotiroff, from CRC AMET / CSIRO at Floreat, also helped with the groundwork. A large airborne electromagnetic survey was flown in this area using the CRC AMET developed Tempest system in early 1999 and the student fieldwork provided valuable follow up to this survey.

SHORT COURSES

The following short courses are scheduled in July

14/15/16 July 1999

MMET 617 *Magnetotellurics and Lotem*

Course Leaders: Professor Keeva Vozoff & Dr Kurt Strack

19-23 July 1999

MMET 606 *Electromagnetic Methods in Mineral Exploration*

Course Leaders: Prof James Macnae and Dr Mike Asten.

Contact: Deirdre Hollingsworth on 9266 3565 or Paul Wilkes on 9266 2330 for more information on all of the above.

CENTRE OF EXCELLENCE

As we go to press we learn that the final hurdle has been cleared to enable the Centre of Excellence for Exploration & Production Geophysics (CEEPG) to be established. It is expected that a formal statement will be made in July. This new Centre will join the Department of Exploration Geophysics, the WA Petroleum Research Centre and the Centre of Excellence in Petroleum Geology in the new National Centre for Petroleum and Minerals Resources Research. The host organisations for the National Centre are, of course, CSIRO's Divisions of Petroleum Resources and Exploration & Mining. John McDonald will be the inaugural Director of the CEEPG.

1999 SOUTH WEST CAREERS EXPO

Two of our honours students, Katherine Trigg and Karoline Stark, helped staff members, Dominic Howman and Bruce Hartley, with our booth at the South West Careers Expo held in Bunbury on Thursday 6 May. Both Katherine and Karoline made decisions to study Geophysics as a result of a previous South West Expo and we appreciate their help this year.

The winner of the Competition to identify a mystery brass object was Katrina Italiano from Bunbury Catholic College.

CONFERENCES

The 1999 APPEA Conference & Exhibition was held at the Perth Concert Hall and Duxton Hotel from 18-21 April.

Brian Evans presented the following paper:

Evans, B.J., 1999, *Developments in pore pressure prediction using seismic-while-drilling technology*, The APPEA Journal, 39, Part 1, 461-474.

GRANTS & SCHOLARSHIPS

The ASEG Research Fund awarded grants of \$5000 each to Chris Walton for his PhD project, *The use of seismic methods for the delineating coal seams, sensing the presence of methane and stress orientation* and Philip Deshon for his Honours project, *The effects of variably stressed and cemented rock on seismic wave propagation*.

Newcrest Mining sponsored the third year field project at Yillara Prospect.

BHP Petroleum sponsored Antony Brockmann's Honours project, *Seismic detection of hydrocarbon within the Macedon Sands*.

Western Mining are sponsoring Eduardo Henrique's Geophysics Postgraduate Diploma, *Potential field modelling at Lake Lefroy, Kambalda, WA*.

Striker Resources are sponsoring the ongoing geophysical investigations to assist diamond exploration in the Kimberleys by David Carter and Paul Wilkes.

Homestake Gold are sponsoring Lee Sampson's Honours Project, *Geophysical investigations near Ravensthorpe*.

The Australian Petroleum CRC has approved a new program *Development of geological disposal of CO₂ gas* and allocated \$30,000 to Curtin Geophysics.

Chris Walton has received a US\$1,000 grant-in-aid from the American Association of Petroleum Geologists Foundation towards his PhD project expenses.

DUKE OF EDINBURGH AWARD

The highest Duke of Edinburgh Award -the gold- was presented to Timothy Dean, one of our 1999 honours students, who is seen here with his mother, Anna, who gained a gold award in the UK. It's the first time in WA that the offspring of a gold award holder has also completed the program.



Timothy and Anna Dean at the Ceremony

STAFF NEWS

On Saturday 6 February Patrick Okoye married Sally Broun in a ceremony at St Columba's Church, South Perth.



Patrick and Sally Okoye

Other good news is that Don Sherlock's wife, Delice, gave birth to a son Julian Hosking Sherlock on 15 April 1999.

Congratulations to both of these staff members.