

Geo-soundings

NEWSLETTER JANUARY - MARCH 1997

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

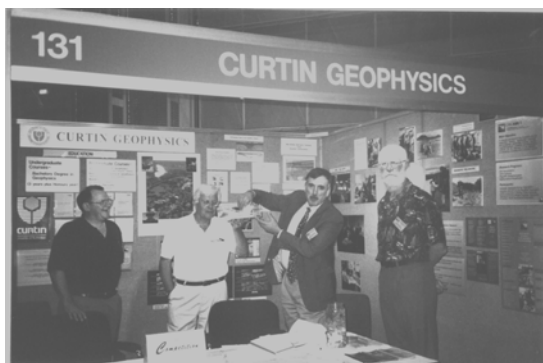
A/Prof Norm Uren, Head
Department of Exploration Geophysics

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

Email enq@geophy.curtin.edu.au
<http://www.curtin.edu.au/curtin/dept/geophy/>

ASEG CONFERENCE

The Department had a booth at the Exhibition at the ASEG 12th Geophysical Conference held in Sydney from 23-27 February 1997. A Curtin rugby jumper was awarded as a prize in a business card raffle. SEG President Fred Hilterman, who drew the prize winner, is shown below with the winner Dr Theodore Herzi Asch.



The following papers were presented at the Conference:

Evans B.J.: *A method for stacking 3-D swath data from a 3-D dipping horizon, without the need for velocity analysis.* Aust. Soc. Expl. Geophys., Preview, 66, 52.

Tadepalli, S.V., McDonald, J.A., Sekharan, K.K., and Tatham, R.H.: *Fracture detection using P-wave AVO measurements.* Aust. Soc. Expl. Geophys., Preview, 66, 80.

Li P., and Uren, N.F.: *The electrical potential arising from a point source in an arbitrarily anisotropic half-space with Regolith cover.* Aust. Soc. Expl. Geophys., Preview, 66, 96. The winner of the best paper at the Conference was Chris Dauth who was a former student of this Department. His

paper was titled *Airborne Magnetic, Radiometric and Satellite Imagery or the Regolith Mapping in the Yilgarn Craton of Western Australia*

PETROLEUM & MINING AUSTRALIA EXHIBITION

The Department exhibited at the Petroleum & Mining Australia Exhibition held on 12/13/14 March at Langley Park. Various members of staff were rostered to work on our booth during the Exhibition. A competition was organised and the winner of the Curtin Rugby Shirt was Mr Robert Berven.

ARC GRANTS

ARC small grants received in the first quarter of 1997 are as follows:

Bruce Hartley and Patrick Okoye *Analysis of seismic wavefronts and self-diffraction in anisotropic media, physical modelling and visualisation,* \$12,000, duration 1 year, commenced on 7/2/97.

John McDonald and Milovan Urosevic *Seismic response of fractured and compartmentalised hydrocarbon reservoirs,* \$10,000, duration 1 year, commenced 5/2/97.

FIELD TRIPS

Twenty students and 9 staff attended the First Year field trip to Fairbridge Farm, Pinjarra on 22/23 March. The students visited the ALCOA mine sites on 22 March. The following day they applied different geophysical methods in the field to gain first hand experiences.

SAND-BOX MODELLING

As many of you know, PhD student, Don Sherlock, was the first person we know to produce a 3-D seismic reflection data set from a sand-box model. Don is pleased to announce that he has produced reflections from four successive layers to date and is hoping to extend this ability further. The results of such modelling will, in the future, have profound implications for 3-D seismic interpretation and time lapse reservoir modelling (ie 4-D)

ENROLMENTS 1997

Total enrolments for 1997 are:

BSc (Geophysics & Hons)

91

GradDip	4
PostGrad Diploma	6
MSc (Geophysics)	6
MSc (MMET)	11
PhD (Geophysics)	8

1996 Graduates were:

PhD Brian Evans **MSc** Sue Downie
 Zhao Ping Mohammad Norozi

MSc (Geoscience Exploration)

Pervez Cheema
 Charles Poynton

PostGradDip

Nooruddin Al Andanoosi

GradDip

Ken D'Cruz
 Dominic Howman
 Ivan Hussein

BSc (Honours)

Kanu Bhana
 Chris Bishop
 Kelvin Blundell
 Stephen Carter
 Wing Chen
 Michael Enright
 Peter Johnson
 Gracjen Lambert
 Brett Lantzke
 Levin Lee
 Chris Manuel
 Leon Mathews
 Paul Mutton
 James Small
 Chris Walton

BSc

Cliff Allen
 Ross Barnett
 Kirsty Beckett
 Timothy Cox
 Simon Davis
 Lucien DeRooy
 Adam Gebarski
 Troy Herbert
 Wayne Hewison
 Michael Isherwood
 Paul McMillen
 Ben Morgan
 Russell Mortimer
 John Sumner
 Ben Whitfield
 Andrea Wieman
 Duncan Wood

students from the first Summer School in 1996 has now started her Geophysics course at Curtin and we look forward to more enrolments in future years.

Next year's Summer School will be from 10-22 January '98

VISITORS

Jeno Gazdag (USA), Yoshinara Nakajima (Japan), and Chris Juhlin (Sweden) all visited our Department during February and March.

COMPUTING

The Department is pleased to announce the donation of CogniSeis software Focus 2D/3D, DLPS and VoxelGeo, valued at A\$344,000. The Focus and logging DLPS software will be operated from the Department's SunServer displayed on the Silicon Graphics workstations. They will be used for postgraduate teaching of seismic 2-D and 3-D processing, as well as used in research projects.

The VoxelGeo, a market leader in 3-D interpretation and visualisation has also been donated and will be used for interpretation projects with input 3-D data sets.

Software

The coal research group has recently purchased a license for Vista 2D/3D software, for field data processing. This software may eventually be used for 3rd year teaching of data processing and manipulation.

Hardware

The coal research group has recently built a 10 cu.in. air-gun for use down-hole and in shallow water. Alongside was built a 12-channel hydrophone streamer for use down-hole and as a bottom-cable. This equipment will allow us to perform cross-hole tomography and VSPs in a mining environment without the concern involved in using explosives. It also offers the potential to record in-shore 2-D and 3-D surveys. If interested call Brian Evans on (08) 9266 7092.

We hope to obtain a high frequency vibrator in the not-too-distant future, and our 96-channel OYO is soon to be upgraded to perform real-time correlation.

EXPLORATION GEOPHYSICS ALUMNI

We have had a number of suggestions that a Geophysics Alumni should be formed. This will enable graduates to keep in touch and meet other graduates from different years. If you are one of our graduates, and are interested in forming an Alumni please fill out the information slip below and post to Ms D Hollingsworth, or, call Deirdre on (08) 9266 3565

Name

Company

Past student/lecturer?.....

Know anyone else who needs to know this info?.....

CRCAMET NEWS

The following Masters in Mineral Exploration Courses are still to be offered in 1997

DATES	COURSE	LEADERS	LOCATION
23-27 June	Advanced EM	Macnae & Asten	Perth
30 June - 4 July	Borehole Geophysics	Tyne & Bishop	Kalgoorlie
7-11 July	Regolith Geology	Anand et al.	Perth
14-18 July	Seismic Methods	Hatherly, McDonald & Urosevic	Perth

For further information contact:

Paul Wilkes T: (08) 9266 2330 F: (08) 9266 3407
 Email: wilkes@geophy.curtin.edu.au

SUMMER SCHOOL

From January 11 to 24, 1997 the second annual ASMV (Australian Student Minerals Venture) Summer School was held in WA for 39 year 10 and 11 school students from NT, SA and WA, funded by the AusIMM.

All of these students are interested in possible careers in Mining and Exploration and their families and the ASMV paid for their participation in the Summer School.

Activities were organised by Curtin, Murdoch, UWA, and WASM to provide practical activities for the students and opportunities to meet with professionals working in Mining and Exploration. Visits to Mine sites and Processing Plants were also included as well as some social events such as a visit to Rottnest Island.

Curtin was the host on two days and provided hands-on activities in Geology and Geophysics. The students enjoyed using geophysical equipment and computer software to provide some insights into the life of professional Geophysicists. We are delighted to report that one of the