

Geo-soundings

NEWSLETTER JUNE 1998

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/>

CONFERENCES

An International Conference on Airborne Electromagnetics was held in Sydney Australia 23-25 February 1998 and was attended by Paul Wilkes, Umesh Das, Brett Harris and Michael Sykes. Two posters were presented as follows:

Harris, B.D., and Das, U.C., 1998, *Target detectability by different AEM systems*: International Conference on Airborne Electromagnetics, Sydney, Australia, 23-25 February 1998, p 1.P2.

Sykes, M.P., and Das, U.C., 1998, *Removal of herringbone effects from AEM data maps using the Radon transform*: International Conference on Airborne Electromagnetics, Sydney, Australia, 23-25 February 1998, p 1.P4.

#####

Jon Cocker attended the Coal98 Conference held in Wollongong, NSW, 17-20 February 1998 and presented the following paper:

Evans, B.J., Urosevic, M., and Cocker, J., 1998, *The use of seismic methods for the detection of dykes*: Proceedings of the 1st Australasian Coal Operators Conference COAL98, Wollongong, NSW, 18-20 February 1998, pp 103-110.

#####

John McDonald attended the 1998 APPEA Conference & Exhibition held at the National Convention Centre in Canberra, ACT from 8-11 March 1998.

#####

Don Sherlock attended the AAPG Annual Convention held 17-20 May, 1998, in Salt Lake City, Utah and presented the following papers:

Sherlock, D.H., 1998, *Seismic reflections without an acoustic impedance contrast*: 1998 AAPG Annual Convention, American Association of Petroleum Geologists, Extended Abstracts, Vol. 2, A597.

Sherlock, D.H., McDonald, J.A., and Evans, B.J., 1998, *Imaging analogue sandbox models*: 1998 AAPG Annual Convention, American Association of Petroleum Geologists, Extended Abstracts, Vol. 2, A596.

CONFERENCES (cont'd)

The 60th EAGE Conference & Technical Exhibition held 8-12 June was attended this year by Bruce Hartley and Umesh Das who presented the following papers:

Hartley, B.M., Lamont, M.G., and Uren, N.F., 1998, *Three dimensional multiple moveout transformation for the removal of water bottom seismic multiples*: 60th EAGE Conf. & Tech. Exhibition, Leipzig, Germany, Vol. 1, 1-26.

Harris, B.O., and Das, U.C., 1998, *Optimisation of primary waveform for airborne electromagnetic surveys*: 60th EAGE Conf. & Tech. Exhibition, Leipzig, Germany, Vol. 1, P109.

Kamkar-Rouhani, A., and Das, U.C., 1998, *Resistivity responses of mineral deposits under a transitional overburden*: 60th EAGE Conf. & Tech. Exhibition, Leipzig, Germany, Vol. 1, P148.

Sykes, M., and Das, U.C., 1998, *The radon transform and its application to airborne electromagnetic data*: 60th EAGE Conf. & Tech. Exhibition, Leipzig, Germany, Vol. 1, P107.

COMPUTING

Thanks go to Green Mountain Geophysics, who have donated 4 licences to run their software on the Sun Server. The software will be used for teaching 3-D survey design.

MASTERS/PHD PROGRAM

A proposal to establish a new Masters/PhD program in Petroleum Geophysical Engineering has been put to the University, for Strategic Initiative funding during 1999 by Dr Evans. The program is expected to train petroleum engineers in the geophysical methods used in reservoir delineation, and train petroleum geophysicists in all aspects of reservoir engineering. The product of the degrees would be a geophysical engineer who would work in the oil field production reservoir development team. A novel part of the course is expected to be the development of 3-D seismic methods and the application of seismic methods in reservoir simulators. This latter course is expected to be run for the first time during the second semester 1998.

SHORT COURSES

A Petroleum and Natural Gas Engineering Short Course was held on Curtin Campus in February 1998. John McDonald taught the Reservoir Geophysics part of the short course.

ENROLMENTS 1998

Total enrolments for 1998 are:

BSc (Geophysics & Hons)	90
PostGrad Diploma	3
MSc (Geophysics)	8
MSc (MMET)	7
PhD (Geophysics)	8

1997 Graduates were:

PhD	BSc
Ping LiBryn A Bender	
MSc	David L Carter
Robert W K Han	Timothy J Dean
PostGradDip	Shane F Evans
Simon P Kawagle	Bradley P Feist
Llewellyn W J Vincent	Andrew D Fitzpatrick
GradDip	Edward J Gerner
Sarah L Finlay	Malcolm Griffiths
D Howman	Rick C Irving
James C Turner	Damian M Leslie
BSc (Honours)	Rachel J Loomes
Cliff R Allen	Russell J McChesney
Simon J Davis	Ryan J Metcalf
Michael G Isherwood	Brendan J Mortimer
Paul J McMillen	Bruce R Redmond
Russell N Mortimer	Simon G Rose
Jonathan Sumner	Lee M Sampson
Benjamin W Whitfield	Benjamin L Sanderson
	John B Taylor
	Troy A Thompson
	Lincoln F Tovey
BSc (Multidisciplinary Science - Geophysics Major)	
Elvyn T Wise	

STUDENT SECTION SEG

We have a new president for 1998 (Alister Forsyth) and a new student adviser (John McDonald) for the student section of the SEG. The new president and team seem to be very active and are seeking some funding from industry.

EXPOS

The South West Careers Expo held in Bunbury on 8/9 May was attended by three members of this Department. Jono Malkiewicz of Donnybrook DHS was the winner of the Competition to guess the shape of the mystery object.

EXPLORATION GEOPHYSICS ALUMNI

During the latter half of 1997 expressions of interest were called for from 'past' geophysics graduates from Curtin University to form an Alumni group. Unfortunately the year ended without too much progress being made to establish this initiative. Also the response to our advertisements via 'Geosoundings' and the ASEG News Letter left a great deal to be desired. However, please be assured that the establishment of the Geophysics Alumni has not been forgotten and it is hoped to hold an informal function later this year with assistance from the Curtin University Alumni Office. It is anticipated that a 'mail-out' to past graduates will be undertaken, inviting them to attend this function/get-together, BUT our address records may be considerably OUT-OF-DATE. So, if you are one of our graduates and interested in forming an Alumni and you did not respond to our requests last year, then please fill out the information slip below and post this to Ms. Deirdre Hollingsworth, or telephone (08)9266-3565, or fax (08)9266-3407, or email: deirdre@geophys.curtin.edu.au.

Name:

Company:

Address/Contact details:

Indicate if you are a PAST STUDENT/LECTURER/
etc???

Do you know anyone else who needs to know this information?
.....

FIELD TRIP

This year's first year field trip was attended by 37 students and 11 staff and was again held at Fairbridge Farm. A highlight of the trip was a visit to Boddington Mine.

ASEG

John McDonald has been appointed Vice President of ASEG for this year. The following talks were given at the March meeting of the Society by members of this Department:

Radon transforms in removal of herringbone effects in airborne EM presented by Michael Sykes, and

The use of seismic methods for the detection of dykes presented by Jon Cocker.

Patrick Okoye was successful in attracting a grant of \$8000 from the ASEG Research Foundation funding for a PhD research project *Recovery of elastic parameters in layered anisotropic media*.

GRANTS

Dr Brian Evans has received a grant from the Gas Research Institute of Chicago, valued at A\$145,000 over 6 months, to study existing seismic methods for pore pressure prediction ahead of the bit and provide an R&D direction for future funding. As a part of this project a sub-project which has attracted Texaco support will examine the use of drilling jars as a down-hole seismic energy source in a producing field in Texas. It is expected that as a result of the study recommendations, an international R&D Consortium of companies and contractors will be established to support the prediction of pore pressure while drilling.

The CSIRO Division of Petroleum Resources is also contracted in the project to perform some fundamental geomechanical studies using cored shales. Dr Evans is expected to be continuously on the move for the next 6 months, so to get an update on the study call him on:

08 9266 7092 or, better still
email evans@geophys.curtin.edu.au.

PRIZES

Troy Thompson, one of our Honours students for this year, has been nominated to receive the prestigious Science Medal awarded by the Royal Society of WA Universities. This award will be presented to Troy on 20th July 1998.

MMET

Three more courses in the Masters series are being run in July 1998 :

MMET 606: Electromagnetic Methods in Mineral Exploration – July 13-17 at Curtin University

Leaders: Prof James Macnae and Dr Michael Asten

MMET 603: Gravity and Magnetic Exploration – July 20-24 at Curtin University

Leaders: Dr Duncan Cowan, Dr David Isles and Paul Wilkes

MMET 616 Techniques in Exploration Geology – July 27-31 in Orange, NSW

Leaders: Mel Jones (De Re Metallica)

John Baxter (Continental Resource Management)

This course includes mine visits (Cadia, Browns Creek)

Places are available for all three courses and further details and registration can be obtained through Deirdre Hollingsworth on ph 08 9266 3565, fax 08 9266 3407.