

## PIRSA State Of South Australia Chair At The National Centre For Petroleum Geology And Geophysics



Richard Hillis (right) with Jerry Meyer (PhD student, left) and Scott Mildren (Research Fellow, centre)

Adelaide University's new School of Petroleum Engineering and Management, making Adelaide a globally significant focus for petroleum related education, training and research.

PIRSA supports the NCPGG through its Targeted Exploration Initiative SA (TEISA) funding of the State of South Australia Chair in Petroleum Reservoir Properties/Petrophysics, which has been held by Richard Hillis since September 1999. Hillis undertook his BSc (London) and PhD (Edinburgh) before moving to Australia, and came to the NCPGG from Adelaide University's Department of Geology and Geophysics. His main research interests are in petroleum geomechanics/in situ stresses and sedimentary basin tectonics. He currently leads a group of 12 – known as the 'stress group' – working on these issues at the NCPGG. The group includes seven PhD students and three research fellows: Dr. Scott Mildren (Petroleum Geomechanics), Dr. Jürgen Streit (Structural

The NCPGG is a joint venture between Adelaide University and the University of South Australia, and is the country's only postgraduate school dedicated to petroleum geology and geophysics. From mid 2002, the NCPGG will be co-located with

Geology) and Dr. Suzanne Hunt (Geomechanics/Stress Modelling). The group is funded by a variety of government (ARC) research grants, industry research projects, contract research and Australian Petroleum Cooperative Research Centre (APCRC) programs. Examples of major research projects in which the group is involved include:

- Tight Gas Reservoirs and Natural Fracturing, Cooper Basin, South Australia (with Santos);
- Contemporary Stress Regime and Neotectonics of Brunei (ARC funded with Shell Brunei);
- Tectonic Evolution of the Bass Basin (with Mineral Resources Tasmania);
- The Australian Stress Map (ARC funded);
- The In Situ Stress Regime of the Gulf of Thailand (with Unocal Thailand), and;
- APCRC Hydrocarbon Seals and GeoDISC (Geological Disposal of CO<sub>2</sub>) programs.

The group is strongly involved with industry and has also undertaken contract research projects for Santos, Phillips, OMV, Shell NZ and Globex. Hillis has given his industry short course on Petroleum Geomechanics to JNOC in Japan and at the recent ASEG Conference in Brisbane. Petroleum geomechanics software written by one of the PhD students in the group, Jerry Meyer, has led to the creation of new South Australian spin-off company, JRS Petroleum Research, with beta versions of the software already having been sold to industry.

In the two years since its formation at the NCPGG, the 'stress group' has published 15 papers on petroleum geomechanics and sedimentary basin tectonics. They have also presented papers at numerous conferences such as the AAPG Bali and Denver meetings, ASEG Perth and APPEA Hobart. Hillis was awarded the Ziad Beydoun Award for Best International Poster at the AAPG Bali meeting and Hillis, John Morton (PIRSA), Dave Warner and Richard Penney (both Santos) were awarded best conference paper at the APPEA Hobart meeting for a paper on the potential for very large unconventional, deep basin, gas resources in the Nappamerri Trough, Cooper Basin, SA. The group has been active overseas, attending conferences, giving courses and running projects in Indonesia, Brunei, Thailand, Japan, US, Belgium and UK.

With the 'stress group' having raised \$1.2MM in project funding since its formation at the NCPGG, significant leverage is being obtained on the TEISA funding of the State Chair. Much of this additional funding is from interstate and overseas. Furthermore, the TEISA funds are helping educate and train future professionals for the oil industry.