

THE ODP UNDERGRADUATE STUDENT TRAINEE PROGRAM: TAKING PART IN EXPERIENTIAL LEARNING AT SEA

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On the 6 November, 2002, the second author sailed out of Panama on board the *JOIDES Resolution* as an Undergraduate Student Trainee on ODP Leg 206. In 2002, Rachel was a second-year student enrolled in the Marine Geoscience strand of a Bachelor of Marine Science at Macquarie University, Sydney Australia.

Experiential learning is a critical component of teaching and learning in the geosciences in Australia and includes such things as field work, vacation employment and occasionally work-place learning units as part of the main stream curriculum. Opportunities are rare however, both in Australia and overseas, for this type of international research-based marine investigation at undergraduate level.

The ODP Undergraduate Student Trainee program was designed to offer the student a wide range of scientific and technical activities while aboard ship and to train the student under the guidance of a scientific mentor. The objective of Leg 206 was to sample a complete oceanic crustal section at a site with a superfast spreading rate to document one end-member style of mid-ocean-ridge development. The leg had only one site; site 1256 adjacent to the East Pacific Rise on the Cocos Plate.

Rachel's interest in marine geophysics led to her being primarily positioned in the paleomagnetic laboratory. The main techniques used on the core in this laboratory were alternating field (AF) demagnetisation, to remove the drilling overprint and determine the characteristic remanent magnetisation on all sediment and some hard rock samples, and anhysteretic remanent magnetisation (ARM) and isothermal remanent magnetisation on some discrete samples. Rachel also took part in writing explanatory notes for the ODP report volume. She described her experience saying, "I worked along side recognised geophysicists learning new techniques that will be invaluable to my continuing studies."

Rachel followed her nine weeks at sea by completing a project-based subject and producing a report describing and discussing the results of her work on board the *JOIDES Resolution*. Her time as a student trainee counted towards this subject.

The ODP undergraduate trainee program was an excellent means of providing students with new oceanographic and scientific skills while gaining a range of both technical and interpersonal generic skills. The program inspires not only the student involved but others with whom they come in contact at their home institution. Rachel described her time at sea as "an extremely intense learning experience, but practical and a lot of fun." Experiential learning allows students to interact with working scientists who pass on enthusiasm as well as knowledge. Rachel was the first and last Australian student to be involved in this scheme and there is now a need to develop an ongoing Australian program placing undergraduate students into marine research programs.