

## **New Zealand**

**Country Representative : Stephen Bannister**

Specific **Goals and Accomplishments** for New Zealand :

*Overall, increase SEG student membership in New Zealand, working towards encouraging new student sections at the New Zealand universities.*

Specifically :

- (1) Re-visit geophysics students at Victoria University again, and continue to encourage them to set up a student section.
- (2) Distribute SEG membership information at the annual NZGS (New Zealand Geophysical Society) symposium, (November 2008).
- (3) Re-contact the student sections at Otago and Auckland University to find out their activities, and how SEG can assist them further.

List **potential universities** in your region/country to be added to **SEG Scholarship** mailing list or for potential student sections.

Victoria University of Wellington (for a potential student section; possible faculty advisor is Dr Tim Stern ([tim.stern@vuw.ac.nz](mailto:tim.stern@vuw.ac.nz))). I would also suggest placing VUW on the SEG scholarship mailing list.

I would also suggest placing IESE (Auckland University) on the SEG scholarship mailing list (advisor : Dr Peter Malin; [p.malin@auckland.ac.nz](mailto:p.malin@auckland.ac.nz) ).

List geophysical **conferences/meetings/symposiums** that have taken place in your Region/Country this year and plan to take place next year.

The 2007 annual geophysical symposium took place in Tauranga in November 2007, with more than 250 attendees. This years 2008 annual conference for the New Zealand Geophysical Society ([www.nzgs.rsnz.org](http://www.nzgs.rsnz.org)) will be held in Wellington in November 2008.

### **Membership:**

Briefly describe your opinion on what **current SEG members** in your Region/Country “**value**” about their membership in the SEG? (Annual Meeting, Publications, Web Site, International Conferences, Continuing Education Programs, etc.).

The on-line access to Geophysics and TLE back-volumes is very highly valued, as is all content on the web site.

New Zealand members appreciate the SEG-co-sponsored ASEG meetings in Australia, which are easier for New Zealanders to attend than SEG. For that reason we continue to encourage co-sponsorship by SEG of ASEG meetings.

How can SEG **better serve geophysicists** in your Region/Country and **gain new members**? Please list **projects or ideas** you may want to pursue (based on discussions with colleagues, section and student section leaders).

On-line services which SEG offer for remote members are critical for New Zealand members (e.g easy online access to Geophysics/TLE archives). Any further improvement in on-line services would help New Zealand members.

We would always value any SEG Distinguished visitors, following the talks given here by Dr Heloise Lynn here in 2004. Tad Ulrych is giving a talk to the student section at Otago University this coming May.

Student members would value sponsorship of travel/accommodation costs to SEG-sponsored conferences (e.g. ASEG), e.g. by SEG Foundation.

### **Oil and Gas Industry:**

Briefly describe the **general status of the oil and gas industry** in your Region/Country (i.e., major players, major fields, politics and the government's role, geophysics as a career).

Oil and gas is currently produced from 21 petroleum mining licences/permits fields, all in the Taranaki Basin. Current reserve estimate is around 55 mb (oil) and 1048 bcf (gas) from the producing fields. Exploration activity continues to be high and is expected to remain so, following the award of permits to two major consortia (including ExxonMobil, OMV, Todd Exploration, Mitsui, PTTEP) for exploration in the Great South Basin, a 500,000 square km area in the southern oceans off South Island. The earliest test drilling in that area is expected in 2-4 years, after new seismic surveys. Exploration activity is also expected offshore Northland, and offshore East Coast.

There are approximately 30 E&P geophysicists working and living in New Zealand, with 2-3 geophysicists on average in each company. There are however 189 geophysicists in total in New Zealand, (based on the last government census in 2006) of which 93% were employed full-time, and 16% were female. Salaries are predominantly between NZ\$40,000 and NZ\$120,000 per year (corresponding to about US\$27,000 to US\$100,000). Many of the "non-E&P" geophysicists work on solid-earth research (in earthquake seismology, volcanology, earth deformation) because of the presence of the active Australia-Pacific plate boundary, and the associated high levels of earthquake and volcanic activity. These geophysicists are predominantly employed by the Crown owned earth science research institute GNS Science, (which is similar to the United States Geological Survey), or by one of the six New Zealand universities. Most graduates leave New Zealand to either carry out further graduate studies overseas, or to work for exploration-service companies in Australia (usually Perth) and the Middle-East.

### **COUNTRY/REGION STATISTICS:**

Number of SEG members (active, associate, student, etc.) :

2008 (March) : 64 total : 13 active; 20 associate; 2 emeritus; 29 students

2007 (August) : 60 total : 13 active, 19 associate, 1 emeritus, 27 students

SEG membership in New Zealand is fairly static : from 20 (2003), to 51 (July 2005), 59 (August 2006), 54 (February, 2007), 60 (August, 2007), and now 64 (March, 2008). Most of the increase between 2003 and the present came from student memberships. Currently 29 of the 60 SEG members (just under 50%) are student members, although numbers fluctuate.

Name(s) of SEG members holding office (chairman of committee, executive committee) in the last five years: *N/A*

Name(s) of SEG members receiving an SEG award in the last 10 years : *N/A*

Student Sections:

University of Otago student section (2005- )

University of Auckland student section (1977- )

Top 15 Oil and service companies doing business in this country (headquartered in what city):

Austral Pacific Energy (NZ) Ltd (Wellington)

Swift Energy New Zealand Ltd (Wellington)  
Tap (NZ) Ltd (West Perth, Australia)  
STOS (New Plymouth)  
ROC Oil (Sydney, Australia)  
Bridge Petroleum (Auckland)  
DiscoveryGeo (Dallas, Texas)  
TAG Oil (New Plymouth)  
Greymouth Petroleum (Auckland)  
Bounty Oil & Gas Ltd (Perth, Australia)  
New Zealand Oil & Gas (Wellington)  
OMV New Zealand Ltd (Wellington)  
Origin Energy Resources (Brisbane, Australia)  
Pacrim Energy Ltd (Australia)  
Shell Exploration NZ Ltd (Perth, Australia)

Other geophysical societies and number of members (list name and city):

New Zealand geophysical society (national organization), 150 members  
([www.nzgs.rsnz.org](http://www.nzgs.rsnz.org))

Names (and cities) of major universities with geoscience programs (address and name of faculty advisor if known):

Otago University (Dr Andrew Gorman)  
Canterbury University (Dr Jarg Pettinga)  
Victoria University of Wellington (Prof. Tim Stern)  
University of Auckland (Dr John Cassidy, Dr Peter Malin)

Percentage of oil production (compared to rest of world) and/or other geophysical activity :

Oil production ca 55 mmbbls/annum (0.04% world)  
Gas production ca 1048 Bcf (0.1% world)  
21 mining licences & permits currently

(Estimated) Number of geophysicists graduating per year countrywide:

Estimated number ~15

(Estimated) Number of geophysicists working in the country:

Estimated number ~175

Is Web Access readily available for students and/or working geophysicists: **Yes, certainly.**

Salary range of Geophysicists – 10 years in the field: **ca US\$50,000 to US\$100,000, depending on whether they are employed by industry or in government research.**

*SEG continuing education programming (in the last five years)*

*Dr Heloise Lynn presented 2 talks in New Zealand (on anisotropy) in August 2004. We would highly value talks by any other Distinguished Lecturers or other visitors in the future. We welcome Dr Tad Ulrych this coming May 2008, when he is due to give a talk to the Otago student section in Dunedin.*

*Accepted authors for SEG annual meeting (last three years)*

*Wayne McRae (2004)  
Alexey Veryaskin (2004)  
David Greagor (2004)*

*Conferences sponsored by SEG held in this country (in the last five years) : N/A*

