

2011 AusIMM NZ Branch – Visiting Lecturer Programme – March–April 2011

The 2011 AusIMM New Zealand Branch Visiting Lecturer is Bob Seal from United States Geological Survey, Reston, Virginia, USA. Bob will present a short course and lectures at several centres during March and April.

Bob Seal Biography

Bob Seal is a research geologist with the United States Geological Survey in Reston, Virginia. He received his BSc degree from Virginia Tech, his MSc degree from Queen's University in Ontario, Canada, and his PhD from the University of Michigan – all in Geological Sciences, emphasizing economic geology. His current research focuses on environmental geochemistry related to mining. He is a fellow in Society of Economic Geologists where he is currently an associate editor for *Economic Geology*. Bob is also an associate editor for *Applied Geochemistry*. He has authored or co-authored over 90 publications. He is a technical advisor for the US Environmental Protection Agency for several mining related Superfund sites, and he is a member of several technical working groups related to the controversial Pebble deposit in southwestern Alaska.

Programme

The following programme for March and April 2011 is tentative and may change. For specific dates, times and venues for events, please refer to notices that will be circulated locally or contact the relevant person listed in the Contacts and further information section at the end of this notice.

Day	Time	Location	Presentations
28 Mon	09:00-17:00	University of Auckland: Geology stage 1 lab, room 301-254, Second Floor, Science complex, corner Symonds St and Wellesley St	Short course (2-day, day 1)
29 Tue	09:00-17:00	University of Auckland: as above	Short course (2-day, day 2)
30 Wed	11:00-12:00	Newmont Waihi Gold, Waihi	Lecture A
31 Thur	11:00-12:00	University of Auckland: Geology lecture theatre, room 301-1060, First Floor, Science complex, corner Symonds St and Wellesley St	Lecture B
1 Fri	16:00-17:00	Victoria University of Wellington: Cotton Building, 3 rd floor, room CO304 (tea room)	Lecture B
4 Mon	12:00-1:00	Oceana Gold Globe-Progress mine	Lecture A
4 Mon	19:30-20:30	Westport Motor Hotel	Lecture B
5 Tue	To be notified	University of Canterbury	Lecture B
6 Wed	To be notified	Oceana Gold Macraes mine	Lecture B
7 Thur	09:00-17:00	University of Otago, Dunedin	Short course (2-day, day 1)
	17:00-18:00	University of Otago, Dunedin: Benson Common Room, Gn9 Ground Floor, Geology Building	Lecture B
8 Fri	09:00-15:30	University of Otago, Dunedin: Paleo-Seds Lab, 1s6 First Floor, Geology Building	Short course (2-day, day 2)

Short course: Environmental Geochemistry for Modern Mining

This two-day short course will examine and summarize current topics in environmental geochemistry as they relate to modern mining. Environmental geochemistry is an important aspect of all stages of modern mining from exploration through permitting, production, and closure. An evolving regulatory environment and innovations in mining and ore-processing techniques necessitate an up-to-date, forward-looking approach to environmental geochemical issues related to mining.

Attendance at the short course is free of charge, but a voluntary donation of \$10 per day is suggested to cover the cost of morning and afternoon refreshments. Pre-registration for the short course is essential (see Contacts and Further Information section below).

Lecture A: Environmental Challenges for Modern Mining - Acid Drainage and Beyond

Mining presents a number of environmental challenges of a geochemical nature. Acid generation and release in the form of acid-mine drainage has long been recognized as a significant issue. Sites with high potential for acid generation typically have a host of other element-specific challenges. Likewise, some sites without significant acid-generating potential can have significant geochemical issues. Case studies will be used to illustrate both. To effectively address these issues at future, current, or abandoned mines, a thorough understanding of the source, transport and fate of elements and related compounds, including pathways to specific bioreceptors including aquatic biota, terrestrial biota, and humans is required.

Lecture B: Mining, Society, and the Environment - The Role of Geology and Environmental Geochemistry for a Sustainable Future

Mineral resources are essential for the health and well being of society. The relationship among mining, the environment, and society have evolved to the point where environmental protection is an integral part of the mine planning and development process, and needs to be started at the earliest stages of the process insure the greatest effectiveness. A key feature that distinguishes mining from most other industrial activities is that the potential "contaminants of concern" are a natural part of the landscape prior to mining and may in fact be the commodities being sought. To make environmental management as effective and cost efficient as possible, it must begin at the earliest stages, even at the exploration stage or before. Knowledge of the underlying geologic characteristics of ore deposits the underlying biogeochemical processes that control the release, transport, and fate of elements and related compounds of concern are essential for accomplishing this goal.

Contacts and further information

For further information and to register for the Short Course (Monday 28 and Tuesday 29 March) and lecture (Tuesday 29 March) in **Auckland**, contact Jeff Mauk at The University of Auckland, J.Mauk@auckland.ac.nz, phone (09) 373-7599 ext 87419

Waihi lecture (Wednesday 30 March): contact Pieter Fransen at Newmont Gold Waihi, pieter.fransen@newmont.com or phone (07) 86 39826

Wellington lecture (Friday 1 April): contact Julie Vry, at Victoria University of Wellington, julie.vry@vuw.ac.nz

Reefton lecture (Monday 4 April): contact Craig McIntosh at Oceana Gold, craig.mcintosh@oceanagold.com, phone (03) 769-8513

Westport lecture (Monday 4 April): contact John Taylor (john.taylor@solidenergy.co.nz or phone 03 788-8083) or Hamish McLauchlan (hmclauchlan@easterncorp.co.nz or phone (03) 789-4148)

Christchurch lecture (Tuesday 5 April): contact David Bell at the University of Canterbury, david.bell@canterbury.ac.nz or phone (03) 364-2987 ext 6717

Macraes mine lecture (Wednesday 6 April): contact Annie Fitzgerald (annie.fitzgerald@oceanagold.com) or Jenny Autridge (jenny.autridge@oceanagold.com) at Oceana Gold

For the short course in **Dunedin** (Thursday 7 and Friday 8 April) and lecture (Thursday 7 April), contact Adrien Dever, administrative assistant, Department of Geology, University of Otago at (03) 479-7519 or email adrien.dever@otago.ac.nz.

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