

2012 AusIMM NZ Branch – Visiting Lecturer Programme – July–August 2012

The 2012 AusIMM New Zealand Branch Visiting Lecturer from Australia is Bruce Craven of Southern Geoscience Consultants (SGC) in Perth, Western Australia. Bruce will present a two-day short course on exploration geophysics for geologist in Dunedin, Reefton, Wellington and Auckland during July and August. This short course is timely with the recent public release of large airborne geophysical survey datasets.

The 2-day short course is free for AusIMM members and students, but there is a fee of \$200 plus GST for non-AusIMM members.

Bruce Craven Biography

Bruce Craven is a director and principal consultant with Southern Geoscience Consultants (SGC) in Perth, Western Australia. He has more than 40 years experience as a minerals exploration and mining geologist/geophysicist, operating in geologically diverse environments and searching for a range of commodities, including precious metals, base metals, nickel, diamonds, iron ore, manganese and uranium.

Since graduating with an Applied Science (Honours) degree from the University of Queensland in 1972, Bruce has worked as a geologist and/or geophysicist for several major resource companies at various locations within Australia and overseas. These companies include Consolidated Gold Fields, Mt. Isa Mines, Esso Minerals, Chevron Exploration Company and Asarco Australia Ltd [Wiluna Mines], where he held positions of Chief Exploration Geologist and Chief Geophysicist, responsible for Asarco's exploration activities in Australia.

Bruce joined SGC as a senior consultant in 1994 and became a director in 1996. As a consultant, he works with a variety of ground and airborne geophysical methods, particularly EM, IP, magnetics, radiometrics and gravity and focuses on geologically driven interpretation of these datasets. He specializes in solid geological, litho-structural interpretations of aeromagnetics. He has managed major surveys and interpretation projects within Australia, New Zealand, Europe, Africa, Indonesia, PNG, South America and Mexico. These projects have covered numerous geological environments and commodities within Archean, Proterozoic, Phanerozoic and Cenozoic terranes), with emphasis on gold, copper-gold, base metals, nickel and iron ore mineralization.

Programme

The following programme for July and August 2012 is tentative and may change. For specific dates, times and venues for the short course, please refer to notices that will be circulated locally or contact the relevant person listed in the Contacts and Further Information section of this notice.

Monday 23 and Tuesday 24 July	Dunedin 2-day short course
Thursday 26 and Friday 27 July	Reefton 2-day short course
Monday 30 and Tuesday 31 July	Wellington 2-day short course
Thursday 2 and Friday 3 August	Auckland 2-day short course

Short course: Integration of geophysics into exploration and regional or project mapping

This two day short course has the following contents:

Introduction

- Geophysical Techniques for Exploration and Mapping
- Methods / Physical Properties (Magnetics, Radiometrics, Gravity, Electromagnetics, Terrain Data, Remote Sensing, Radar)

Aeromagnetism

- Basic Physics, Magnetization and Physical Properties
- Acquisition and Processing Procedures
- Observation Methodologies
- Integration Methodologies
- Quantitative / Automated Methodologies and their Role
- Interpretation Strategies
- Example Data sets and Practical Exercises

Radiometrics

- Basic Physics and Physical Properties
- Acquisition and Processing Procedures
- Observation Methodologies
- Integration Methodologies
- Quantitative / Automated Methodologies and their Role
- Interpretation Strategies
- Example Data sets and Practical Exercises

Gravity

- Comparison of Gravity with Aeromagnetism
- Density; controls and properties
- Acquisition and Processing Procedures
- Observation Methodologies
- Integration Methodologies
- Quantitative / Automated Methodologies and their Role
- Interpretation Strategies
- Example Data sets and Practical Exercises

Electromagnetics (EM)

- Conductivity; controls and properties
- Acquisition and Processing Procedures
- Observation Methodologies
- Integration Methodologies
- Quantitative / Automated Methodologies and their Role
- Interpretation Strategies
- Example Data sets and Practical Exercises

Other Methods, Data and their Contributions

The Importance of Geology to Successful and Broader Interpretation

Contacts and further information

Dunedin short course (23-24 July): contact Simon Cox at GNS Science, s.cox@gns.cri.nz, phone (03) 479-9670

Reefton short course (26-27 July): contact Peter O'Sullivan at Minerals West Coast, email petero@mwco.org.nz, phone (03) 768-5600, Mobile 0274 318-581

Wellington short course (30-31 July): contact Tony Christie at GNS Science, t.christie@gns.cri.nz, phone (04) 570-4682

Auckland short course (2-3 August) and **Auckland lecture** (Monday 30 April): contact Ingo Pecher at the University of Auckland, email i.pecher@auckland.ac.nz, phone (09) 373 7599 extension 83245