AIG (NSW Branch) - SMEDG - Geological Society of Australia (NSW Division)

Geochemistry – Vectoring to Mineralisation

Two Day Geochemistry Seminar & Workshop

Date:
Friday 21st and Saturday 22nd August

Times:
8:00am – 4:30pm (for traffic/parking reasons mainly).

Venue:
University of New South Wales, Kensington.

Outline of Geochemistry Seminar & Workshop

The objective of the seminar and workshop is to focus on the practical application of geochemical methods and understanding the nature of geochemical processes in the field. We have pulled together experienced presenters in their specialist fields to discuss and run practical sessions on a range of geochemical and related data interpretation topics.

- There will be a mix of introductory and more theoretical material demonstrating underlying principles and methods of data interpretation based on illustrative case studies using a variety of geochemical methods and approaches.
- Presentations and practical workshop examples will highlight methods of making observations, sample collection and interpretation strategies within a wide range of regolith and field settings at continental, regional to local scale.
- The importance of integration of geochemical data with geophysical and geological information will be highlighted as a means of interpreting field geochemistry.
- Field and laboratory sampling and splitting methods, sample processing, issues related to QA/QC, use of standards, blanks and similar matters will be discussed.
- Application, advantages and limitations on the use of pXRF and other field portable equipment will be presented.

The Presenters and their Subject Area

Neil Rutherford: **Geochemistry in the regolith (near surface) environment, observing and interpreting geochemical dispersion in the landscape, sampling and analysis.**

Geological and geochemical consultant with over 40 years' experience in mineral exploration, project management and ore body evaluation with specialist experience in precious and base metals, uranium. A recognised industry consultant and "in-house" workshop teaching and lecturer in geochemistry and a range of metal and non-metal mineral commodities and settings. Has worked extensively in Australia, Asia, Asia Pacific and in Africa, Cyprus, Turkey, Balkans. Over the last fifteen years he has acted as a Competent Person on the ASX bourse.

David Cohen: **Regional mapping scales, the problem with cover, sampling and interpretation strategies, multi-element geochemistry, back grounds and thresholds.**

David Cohen is head of the School of Biological, Earth and Environmental Sciences at the University of New South Wales, and a former President of the Association of Applied Geochemists. He has over 25 years research experience in exploration and environmental geochemistry with projects based in Australia, Europe, Asia, the Middle East and North America. He has published over 60 papers, book chapters and major government reports and is an associate editor of the Journal of Geochemical Exploration. He was the 2013 AusIMM visiting lecturer to New Zealand.

Anita Andrew: **Application of light element isotopes in exploration (H, C, O, S, Cl etc.)**

Anita Andrew was based in the minerals and petroleum divisions of CSIRO both as a research scientist and manager working in the development of new exploration technologies for some 20 years. She is currently a Visiting Lecturer at the UNSW and is Editor-in-Chief of the Australian Journal of Earth Sciences. In 2004 she established Environmental Isotopes Pty Ltd a company that provides specialist stable isotope analytical and consulting services. EI has a significant client base in industry, government and academia particularly in the resources, environment and forensic areas.

Graham Carr: **Application of heavy element isotopes in exploration (Cu, Fe, Pb, U, Th, etc.)**

Graham Carr retired from CSIRO in 2014 after a 35 year career as a research scientist and research manager. At the end of his career he was Chief Scientist for the Division of Earth Science and Resource Engineering. In his research career he specialised in the application of Pb isotopes to mineral exploration – in both the primary and weathered environments. He led or participated in 5 AMIRA projects and managed the CSIRO isotope consultancy SIROTOPE for two decades. He is currently a CSIRO Honorary Fellow, President of the Geological Society of Australia and still involved as a consultant.

Peter Williams: **Oxide zone geochemistry, controls on geochemical dispersion in the regolith/oxide zone.**

Emeritus Professor Peter Williams was appointed Foundation Professor in Chemistry at the University of Western Sydney Nepean in 1991. Prior to that Pete was Reader in Chemistry of the University of Wales at University College Cardiff for 16 years. He has formal academic qualifications in both chemistry and geology and has published over 300 publications in refereed journals, received numerous awards and gained industry recognition for his work. In 2008 he was appointed Chair of the Commission for New Minerals, Nomenclature and Classification of the IMA. In 2003 a new mineral, "petewilliamsite", was named after him in recognition of his achievements in mineral chemistry.

Ian Graham: **Primary geochemical halos about mineralised systems, resistate and rare earth geochemistry.**

Ian Graham is a Senior Lecturer in Earth Sciences at the University of New South Wales, Sydney. He obtained his BAppSc (Hons) from the University of Technology, Sydney in 1991 and PhD from the University of Technology, Sydney in 2000. His areas of research interests include ore deposit genesis, igneous petrology, geochronology, gem deposits, applied geochemistry and mineralogy, intraplate volcanism and LIP's. He has worked on ore deposits throughout Australia, Indonesia, Papua New Guinea, Laos, Greece and South Africa. He is currently the SW Pacific regional councillor of IAGOD and is an Associate Editor of *Mineralogical Magazine*.

Dane Burkett: **Use, practical application and limitations of portable XRF, XRD and other portable field equipment**

Dane Burkett is a PhD candidate at the University of New South Wales, studying the geological evolution of the Kulumadau epithermal deposit on Woodlark Island, PNG. He has gained extensive experience in the practical use of field portable XRF, XRD, spectral and similar new innovative portable instrumentation for field research and has recently had a paper accepted for publication in *Canadian Mineralogist* on the application of pXRD to epithermal gold deposits.

Venue, Registration Fees and Attendance Details

Venue:
University of New South Wales: Lecture theatre and work shop laboratory to be finalised based on attendee numbers. To be advised to attendees.

Registration and Fees:
Register at https://www.aig.org.au/events/geochemistry-vectoring-to-mineralisation-workshop/

Employed attendees: $300.00
Unemployed Attendees: $150.00
Registered Students: $80.00

(Student sponsorship for attendance by Geological Society of Australia is available upon presentation of Registration receipt. Contact Ian Graham at UNSW)

- Registration Includes: Coffee/Lunches/Wrap up drinks end of Saturday Session.
- Dinner Friday evening will be optional at a local restaurant and at attendee's cost.
- Parking is available onsite at UNSW at cost: $20/day for parking ticket Friday only, Saturday parking is free.
- Details and ticket will be sent to attendees requiring onsite parking ticket.
- Bus services to UNSW from city shown on map below (lower campus drop off).
- Local Motel/Hotel bookings Assistance can be arranged if required. At attendee's cost.