



Central West Exploration
Discussion Group

CENTRAL WEST GEOLOGY TECHNICAL SESSION

FRIDAY 9th November

Parke – Bushman Motel, 9-13 Peak Hill Rd (Newell Hwy)

6:00pm – 8:00pm

Join us on Friday 9th November for a technical presentation by:

Professor David R Cooke, CODES-TMVC

Porphyry copper, gold and molybdenum deposits - new geochemical exploration methods to aid discovery

ABSTRACT:

In the past decade, significant research efforts have been devoted to mineral chemistry studies to assist porphyry exploration. These activities can be divided into two major fields of research: (1) porphyry indicator minerals (PIMS), which aims to identify the presence of, or potential for, porphyry-style mineralization based on the chemistry of magmatic minerals such as plagioclase, zircon and apatite, or resistate hydrothermal minerals such as magnetite; and (2) porphyry vectoring and fertility tools (PVFTS), which use the chemical compositions of hydrothermal minerals such as epidote, chlorite and alunite to predict the likely direction and distance to mineralized centres, and the potential metal endowment of a mineral district. This new generation of exploration tools has been enabled by advances in laser ablation-inductively coupled plasma mass spectrometry, short wave length infrared data acquisition and data processing, and the increased availability of microanalytical techniques such as cathodoluminescence. PVFTS and PIMS show considerable promise for porphyry exploration, and are starting to be applied to the diversity of environments that host porphyry and epithermal deposits around the circum-Pacific region. Industry has consistently supported development of these tools, in the case of PVFTS encouraged by several successful "blind tests" where deposit centres have successfully been predicted from distal propylitic settings. Industry adoption is steadily increasing but is restrained by a lack of the necessary analytical equipment and expertise in commercial laboratories

The evening will include a 2 course sit down dinner at a cost of \$40 payable on the evening.

RSVP by Friday 2nd November for catering – please note late RSVP's will not be accepted by the venue

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