



School of Earth Sciences Seminar Series

Barry Bourne

Principal Consultant, Terra Resources

Petrophysics and Exploration Targeting: The Value Proposition

The School of Earth Sciences is pleased to invite you to a Lecture in the SES Seminar Series given by Barry Bourne entitled “Petrophysics and Exploration Targeting: The Value Proposition”.

The major challenge associated with understanding petrophysical data is not making the measurement, but rather understanding the results. Several case studies are presented where the petrophysics have determined not only which geophysical techniques to apply but whether a geophysical target has indeed been tested. For example, the sedimentary textures associated with sediment hosted copper mineralisation can compromise the inductive conductivity and resistivity response (anisotropy). Chargeability highs associated with porphyry copper mineralisation is indicative of disseminated pyrite in the propylitic and pyrite +/- chalcopyrite +/- bornite in the potassic alteration zones and higher chargeability does not necessarily mean more copper. Drill testing EM plate approximations for nickel sulphide and volcanogenic massive sulphide (VHMS) ore deposits can benefit from inductive conductivity measurements on core as it can determine whether an EM conductor has been intersected. In most porphyry systems magnetite is coarse-grained, therefore a world class porphyry deposit should not have dominant remanent effects and the only likely source of remanence features in younger terrains are oxidised mafic intrusions and skarns.

Barry Bourne graduated in geology and geophysics from the University of Western Australia. He is a Fellow of the AIG, on the committee of the ASEG Research Foundation and an active member of the ASEG/ SEG. He is also on the external advisory committee for the UWA Centre for Exploration Targeting. Mr Bourne has extensive domestic and international mineral exploration experience. Up until 2013 he was Chief Geophysicist for Barrick Gold and is now a mineral exploration consultant to private and public international exploration groups. Mr Bourne began his career as a geophysicist with the CRA/Rio Tinto Exploration group.

VENUE Woolnough Lecture Theatre (G.107), Geography and Geology Building
University of Western Australia, 35 Stirling Hwy, Crawley 6009
Pay parking is available along Fairway (approx. \$1per hour)

TIME **4:00 - 4:45pm Thursday 31st August, 2017**

You are invited to join us afterwards for refreshments provided for sale by our local SEG Student Chapter in the Resource Room, Robert Street Building.

