

SMEDG meetings are customarily held on the **4th Thursday** of the month at Club York. Due to the ongoing COVID-19 situation normal meetings may be suspended dependent upon restrictions in place, with these replaced by Zoom meetings. We will keep subscribers up to date as the situation evolves.

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SMEDG
SYDNEY MINERAL EXPLORATION DISCUSSION GROUP

Next Meeting
Thursday April 27 - 5.30 for 6.00 pm - Club York
and Zoom - Dr Phillip Hellman will be talking on:

Understanding and Assessing Recent Rare Earth Discoveries.

Registration is required to attend via Zoom - please follow [this link](#). We urge those who can attend in person to come and see what promises to be a very interesting and topical talk, especially given the forecast increase in demand for rare earths, and the drive for diversification of supply. This talk will be valuable for not only technical professionals, but also for those involved in assessing such deposits in the markets. The talk, as usual, will be followed by dinner.



TALK SYNOPSIS

“It is likely that relatively soluble "ionic clay" type deposits are more widespread than is currently realised. Although of lower grade, these may prove considerably more attractive than higher grade deposits containing REE-bearing minerals that require aggressive leaching conditions and high capital costs.”

This prophecy was heard at a SMEDG meeting in 2017, another reason to come and join SMEDG.

The exciting discoveries of low grade easily recoverable rare earth element (REE) in Australia and elsewhere are underpinned by the ability of REE to be mobilised and re-deposited. The experience gained in Australia of using the regolith as an exploration medium will continue to result in the discovery of more ionic-type deposits. It is likely that secondary REE deposits that are not ionically bonded and not clay-hosted will also be discovered.

This talk will discuss some recent primary and ionic adsorption discoveries and will provide some suggestions for critically assessing emerging rare earth projects.

Phillip Hellman has worked on a variety of rare earth projects as well as the fundamental geochemistry of rare earth behaviour.

This talk is dedicated to the memory of Rob Duncan who passed away in 2021 and whose name lives on with the “Duncan Deposit” at Mt Weld, Western Australia.

Biography

Dr Phillip Hellman (BSc Hons 1, PhD, Fellow AIG) is an Associate of Behre Dolbear Australia and an Associate of H&S Consultants Pty Ltd with more than 40 years of experience as a professional geologist. Dr Hellman is the former Managing Director of Hellman and Schofield Pty Ltd. He has worked on numerous rare earth projects in Australia, Asia, Africa, India, Madagascar, Mongolia, Saudi Arabia and USA. He is the author of various specialist academic and applied papers on rare earth deposits and has presented to the EURARE, the European rare earth industry’s specialist organisation. He is a Competent Person under the JORC Code.

Dr Hellman undertook postgraduate (PhD) studies in experimental petrology and geochemistry at Macquarie University and University of Cambridge (UK) from 1975 to 1978. Papers from this work were published in a number of journals including Nature, Contributions to Mineralogy and Petrology, Earth and Planetary Science Letters and Royal Society of NSW. A major part of his Ph D was concerned with neutron activation analysis of rare earth elements and electron probe microanalysis. This research resulted in the documentation of the mobility of REE in a variety of geological environments and disproved the then current view that REE were largely immobile during alteration processes.



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