

DEVELOPING A MODEL FOR THE EXPLORATION OF CLAY-HOSTED RARE EARTH ELEMENTS

PHD PROJECT

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RESEARCH PROJECT

Clay-hosted REE deposits are gaining increasing interest within the Australian exploration community because of their potential for low environmental impact and low-cost recovery.

However, the exploration for these deposits in an Australian setting is still relatively new and as a result there are very few models for the formation of these deposits that can be used to guide regional scale targeting.

The project will investigate several South Australian clay-hosted REE deposits and prospects to improve our understanding of the key requirements for the formation of economic clay-hosted deposits. The project will examine samples of basement (fresh rock) and the clay-rich weathering profiles that host the zones of elevated REE. It will use a combination of high-resolution imaging, whole rock chemistry and stepwise leaching experiments to identify the mineral hosts of REE and potential recovery rates of REE from these deposits.

An additional outcome will be a better understanding of how tracer elements such as REE behave in regolith.