Alligator Rivers Uranium Province – learnings, theories and next steps

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ABSTRACT

Alligator Energy Limited (AGE) has been actively exploring in the Alligator Rivers Uranium Province (ARUP) area since 2010, and has a geological / technical team with experience in the region well beyond that. The ARUP has the highest grade uranium deposits in Australia with some settings similar to those of the Athabasca Basin in Canada, but with several distinguishing characteristics of its own.

AGE has the second largest landholding in the region with granted tenements less than 20km from the Ranger mine (>250Mlb contained U_3O_8) and Jabiluka deposit (>350Mlb contained U_3O_8) along with applications adjacent to the historic Nabarlek mine (24Mlb @ 1.84% U_3O_8). Recently AGE has undertaken a significant whole of region review based on its accumulated exploration, geophysics, geochemistry, magnetics and drilling ("rocks in the tray") work over many years. This regional scale review had three main focuses working from a known resource mechanic outwards to determine controlling factors where they might re-occur and how to identify them from existing datasets for which some facets of work remain ongoing.

As a result, new models for the generalised stratigraphic distribution of the region have been derived along with new and amended concepts for structurally hosted uranium resources in the region. On-ground knowledge and experience throughout the ARUP has been the key factor in unravelling some of the regional complexities.

This presentation will highlight the initial results of this review, key findings, and updated theories for settings of larger uranium deposits, and next steps planned in the exploration of the tenements, including new application areas.