Footprints of unconformity-related uranium deposits –

Finding Bigfoot in the ARP

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ABSTRACT

In 2018, Vimy Resources embarked on a new chapter in its mission to become a reliable and respected uranium producer by acquiring the Alligator River Project (ARP) in the Northern Territory of Australia.

The ARP is characterised by a large number and spatial extent of prospective structural corridors and host stratigraphy, as well as a range of targets and prospects, typically concealed as a result of cover and weathering profile. The Angularli deposit is the most advanced of those prospects.

Throughout 2018, Vimy completed a Mineral Resource estimate, underground mining study, and some preliminary metallurgical test-work over the Angularli deposit, followed by a scoping study. This study confirmed the potential of that project to rank in the lower quartile of global uranium projects on an operating cost basis. It also highlighted the value associated with identifying additional high-grade mineralisation on the ARP, as additional mill feed for a process plant at Angularli.

Mineral exploration for concealed high-grade low-tonnage unconformity-related uranium deposits requires developing a methodology suited to detecting large-scale footprints of deposits, and vectors from their most distal expressions to their high-grade core. Key to that methodology is the ability to identify thresholds of detection of alteration envelopes from a regional to district and deposit-scale and maximise sample spacing to generate vectors within a deposit footprint.

This presentation highlights the integration of footprint components in the search for unconformity-related uranium deposits across the ARP, to derive an exploration matrix capturing the different dimensions and thresholds of those components. It discusses the relative ranking of critical components based on deposit styles, in a north Australian environment and its relevance to decreasing the exploration search space and at the drill planning stage.