Quartz Hill Technical Report – April 2011

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Quartz Hill - Rare Earth Element Project (EPC 100% operator)

The project consists of two granted exploration licenses [EL25296 and EL24838] of which Cazaly Iron Pty Ltd are the holders and Epic are the sole operators. The project area is located in the eastern Harts Ranges in the Northern Territory approximately 170km east-northeast of Alice Springs, on the Illogwa Creek 1:250,000 Geological Map Sheet SF/53-15.

Exploration is being undertaken on rare earth element (REE) +U-bearing pegmatite bodies and copper occurrences within the Entia Dome (Figure 1).

Due to a significant and extended wet season throughout Northern and Central Australia in the beginning of 2011 the ability to commence exploration activities was delayed until April of this year. Vehicle access remained limited due to the poor conditions of all tracks leading into and throughout the licences and the persistence of running water in most of the major creek systems. As a consequence of the limited access exploration activities were restricted to EL24838 and the northeast corner of EL25296.
Field activates were concentrated in the area associated with the REE+U-bearing pegmatite field known as the ‘Lone Pine’ prospect (Figure 2). The Lone Pine area is dominated by hilly topography and long, linear ridge lines of pegmatite bodies. Mapping of the numerous coarse grained pegmatite bodies confirmed the presence of several concentric zones within individual bodies which suggest a minimal depth of erosional exposure.

In general, the concentric zonation within pegmatites is commonly associated with differing styles and types of mineralisation in pegmatites with mineralisation restricted to individual zones and their contacts. Mapping suggests that only the outer ‘Wall’ and minor ‘Intermediate’ zones are exposed, which are prospective for niobium-rich mineralisation, compared with the tantalum-rich mineralisation of the inner ‘Intermediate’ and ‘Quartz Core’ zones. Several pegmatites displayed discordant ‘Apparent Replacement’ zones which can contain high concentrations of REE mineralisation.

A total of 37 rock chip samples were collected from 30 individual and/or coalesced pegmatite bodies. The majority of samples were taken from identifiable Wall, Intermediate, and Apparent Replacement zones, and where possible their contacts to identify potential high-grade zones (Figure 2).

All samples were submitted to Ultra Trace Laboratories Pty Ltd, Perth for analysis with results pending at time of writing.

Figure 2: Lone Pine pegmatite rock chip samples (red stars)
Reconnaissance mapping and field prospecting across the lease confirmed previously identified Heavy Rare Earth Element (HREE)-bearing samarskite associated with the Quartz Hill pegmatite body (Photograph 1 & 2). A sample was taken for analyses with results pending at time of writing.

Several additional pegmatite bodies were identified in the north of the lease which will be followed up in the next field campaign.

Photograph 1: HREE-rich Samarskite crystals at Quartz Hill

Photograph 2: HREE-rich Samarskite crystals with associated Smokey Quartz at Quartz Hill