

## **Geological Features and Environmental Issues for New Uranium Mines in Australia**

I.B. Lambert & A.D. McKay

This paper outlines the geological features of three new and proposed uranium mines in Australia, at Jabiluka, Beverley and Honeymoon. It highlights the environmental and social factors that have arisen in their approval processes, which are indicative of the high levels of public scrutiny that can be expected at new uranium mines in Australia and elsewhere.

Jabiluka is one of the world's largest unconformity-related uranium deposits. It occurs in the wet-dry tropics of the Kakadu region, Northern Territory, some 20 km north of the existing Ranger mine (owned by the same company). Mining must meet stringent conditions relating to protection of the environment, World Heritage values, fauna, flora and cultural heritage (including Aboriginal sacred sites), communication with Aboriginal people, and rehabilitation of the site. To further minimise the level of environmental and social impacts, full-scale commercial mining at Jabiluka will only be reached in 2009 following the scaling down of production at Ranger mine, so that two mines would not be in production simultaneously.

Beverley and Honeymoon are sandstone-type deposits in the remote arid north of South Australia. Existing groundwaters in the mineralised aquifers have high salt and natural radioactivity contents. The major issue in the environment impact assessment processes for these deposits was disposal of liquid wastes in the parts of the aquifers already mined out by in-situ leaching.