

**Contrast between 3.0 Ga Lumby Lake sediments and Steep Rock sediments, Ontario, Canada: characteristics of failed rift sediments?**

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Unusual 3.0 Ga sedimentary rocks appear in the Lumby Lake and Steep Rock areas, Ontario, Canada.

Very contrast geological natures were found although rocks in both areas are continuous. In the Lumby Lake area, silicic-banded iron formations and pyritic black shale are well-preserved. Ultramafic-mafic metavolcanic rocks including pillow lava, massive lava and hyaloclastite are ubiquitous. In the Steep Rock area, volcanic rocks and banded iron formations are essentially absent. The volcanogenic massive sulfides also appear in the lower stratigraphy of the Lumby Lake area. Essentially Steep Rock sediments represent very shallow marine sequence and the Lumby Lake sediments represent deep sediments. Deposition in the failed rift environments may explain the transition from deep to very shallow sediments found in both areas.