

**The Character and Tectonic Implications of Cambrian Volcanism  
Over Avalonian Terrane: An Overview**

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Cambrian basaltic rocks associated with Acado-Baltic sedimentary rocks in Newfoundland, New Brunswick, Nova Scotia, Norway and Poland show characteristics consistent with emplacement in a tensional tectonic setting. The basalts exhibit both alkaline and tholeiitic affinities with major and trace element compositions representative of continental, within-plate basalts. The small volume and bimodal (basalt-rhyolite) nature of the volcanic rocks at many localities in the Acado-Baltic province support a tensional tectonic environment. Their small volume and low frequency of erup-

tion suggest that only small amounts of lithospheric extension took place. The extension may represent the final stage of a major tensional event prevalent during the late Precambrian. Volcanic activity was apparently most common during the Early and Middle Cambrian and least common during the Late Cambrian. Using volcanic activity as an indicator, it appears that the tension lasted throughout the Early and Middle Cambrian but waned in the Late Cambrian, possibly in direct or indirect response to processes that led to closing of the Iapetus Ocean.