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## An Overview of Shale Gas Deposits in Eastern Canada

*Ruiqiang Li and Maurice Dusseault*

*Department of Earth and Environmental Sciences, University of Waterloo, Waterloo, Ontario, Canada, N2L 3G1*

### **Abstract**

As one of the world's top shale gas reserve holders, Canada has abundant shale gas resources not only in the west (British Columbia and Alberta), but also in the east (Quebec and Atlantic Canada). However, commercial shale gas production has only occurred in western Canada because of the huge and geologically favorable shale gas disposition in the Western Canadian Sedimentary Basin, and because of concerns about hydraulic fracturing safety in eastern Canada. Therefore, western Canadian shales, such as the Triassic Montney Formation and the Devonian shale deposit in the Horn River Basin, have been studied extensively in the last decade, while eastern Canadian shales are not sufficiently understood in terms of reservoir characteristics, especially their geomechanical properties.

In order to fill the knowledge gap mentioned above, this study examines the geological and geomechanical characteristics of three selected shale gas deposits in eastern Canada: the Utica shale in Quebec, the Frederick Brook shale in New Brunswick, and the Kettle Point shale in Ontario. A comparison of reservoir characteristics between shale deposits in eastern Canada and those in western Canada is presented. Moreover, insights into future development approaches of these shale deposits are raised based on this comparison.