

## **Tools to Get the Most Information from Shale Cores: An Example from the Lorraine and Utica Shales of Quebec, Canada**

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### **Abstract**

Several hundreds of meters of cores were recently cut through the Ordovician Lorraine and Utica shales in the Saint-Lawrence Lowlands of Quebec. One of the exploration objectives was to identify horizontal targets with the highest potential for gas production within an approximate 300m thick Utica Shale succession. Another objective was to find a tool, other than logs, that could help distinguish the Flat Creek, Dolgeville and Indian Castle formations within the Utica Group, as rock cuttings within this thick carbonate-rich succession appear to be undecipherable. A final objective was to understand lateral facies variations and determine the relative importance and distribution of natural fractures within the Utica Shale in the Saint-Lawrence Lowlands. Thus, several macroscopic and microscopic features in Utica and Lorraine cores will be presented illustrating the significance of going beyond core descriptions and core analysis by applying methods and using tools that can truly enhance our understanding of mud size sedimentary deposits.