

**Depositional and economic aspects of Upper Carboniferous coal measures  
in the Gulf of St. Lawrence-Sydney Basin region**

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A seismic facies related to Upper Carboniferous Coal Measures has been mapped over an area of more than 60,000 km<sup>2</sup> in the Gulf of St. Lawrence-Sydney Basin region of Atlantic Canada, including central and eastern Prince Edward Island. The depositional continuity indicated by this seismic facies is on the scale of cyclothem deposition in the Illinois Basin and Mid-Continent Basin region of the United States, and suggests an analogous stable cratonic shelf setting for the Gulf of St. Lawrence-Sydney Basin region. It also suggests that marine incursions occurred during the deposition of these Coal Measures. Evidence for such incursions, in the form of agglutinated foraminiferal assemblages, has been reported from coal-bearing strata of the

Sydney Basin, Cape Breton Island. Similar assemblages have recently been found in four offshore wells in the Gulf of St. Lawrence. This discovery supports arguments for cyclothem deposition and enhances the possibility of marine source rocks for hydrocarbon generation.

The Coal Measures generally are too deep to mine, but they contain a large resource of coalbed methane, and also may have charged deeper and shallower reservoirs with this natural gas. With the present outlook that gas will be the fuel of the twenty-first century, this indicated resource presents a potentially rewarding challenge to determine how it can be recovered and used.