Facies changes in the upper third of the Albion Member of the Stellarton Basin

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Core from two drill holes containing sandstone, mudrock, coal and oil shale from the Stellarton Basin was examined in detail. The Stellarton Basin is located within the larger Maritime Basin and formed as a result of dextral movement along the Cobequid and Hollow fault system. Previous studies of the basin indicate rapid clastic facies changes, particularly within the lower members of the basin. Less frequent lateral variations within the coal and oil shale-rich layers has been attributed to movement along the most distal basin-bounding fault. Soft sediment deformation observed in the core from this study indicates that the basin was tectonically active at the time of sediment deposition. The objectives of this study are to further the understanding of the distribution of sediments within the basin, their provenance, and to interpret the depositional environment. An interval within the upper third of the Albion Member was chosen to for a detailed study because any lateral continuity of these clastic units may possess hydrocarbon potential. Preliminary petrographic analysis of sixteen samples indicates that there is some lateral continuity to these units. Heavy minerals and clasts found in the thin sections require further investigation before provenance interpretations can be concluded.