

Current research into Carboniferous basin development in western Newfoundland and nearby areas, using geological and geophysical data

G.S. Langdon

Department of Earth Sciences, Centre for Earth Resources Research, Memorial University of Newfoundland, St. John's, Newfoundland A1B 3X5, Canada

Recent research in western Newfoundland has involved the interpretation of a newly acquired seismic line over the portion of the Carboniferous basin exposed onshore. These data, in combination with the onshore geological map database, are being applied in an interpretation of the seismic data offshore in the Sydney Basin and eastern Magdalen Basin. We are interested in mapping the shape and distribution of the Carboniferous, and in studying the genesis of small fault-bounded subbasins within the context of large-scale transcurrent faulting and its associated stress regime. In the immediate area this may involve an under-

standing of the relationship between the deformation history of slightly older Paleozoic rocks, igneous and associated mineralizing fluid activity during Carboniferous time, and the movement on large-scale lateral faults identified from offshore geophysical data; these aspects are now being investigated from Cape Breton Island across the Cabot Strait to southwestern Newfoundland. It is hoped that any forthcoming results or interpretations could be integrated with similar studies elsewhere to lead to a better understanding of the Maritimes Basin.