

THE GEOLOGICAL SETTING OF THE GULF OF ST. LAWRENCE

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Extensive geological field work, supported by detailed sample laboratory studies and nearly 6,000 miles of marine seismic reflection data in addition to published previous work, have lead to a better understanding of the geological setting of the Gulf of St. Lawrence.

It is now known that the Gulf can be divided into two regions: the hardly explored, gently south dipping monoclinial lower Paleozoic Anticosti platform in the north and the Carboniferous basin (Fundy Basin) in the center and south. The Carboniferous basin in turn consists of the Bradelle platform area to the west and the Magdalen Salt Basin to the east. The Bradelle Platform is relatively undisturbed and has a sedimentary section up to 15,000 feet thick whereas the halotectonics of the salt basin area is complex and there sediment thickness can be over 30,000 feet. Most of the Carboniferous section is of continental origin. The Upper Mississippian, however, is partly marine. The Fundy Basin is considered to be a "Rift Valley" complex delimited by normal faults which were active during sedimentation.

Normal faulting, thrusting, folding, growth structures and salt movements have resulted in the formation of many distinct targets which makes the Gulf of St. Lawrence a very attractive, multiprospective area with abundant primary objectives at relatively shallow depth (5,000 - 15,000 feet).