

**Geology - applications in engineering and the environment in Newfoundland and Labrador****R. Cottingham***Newfoundland Geosciences Limited, 607 Torbay Road, P.O. Box 9370, Station "A",  
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There is a natural tendency to think of a geologist practising in Newfoundland and Labrador as a "hard rock" specialist conducting exploration work for the mining and petroleum industries and government agencies. Most geologists in the province undoubtedly are involved in this type of work but there are many other important areas where geology skills are applied particularly in the fields of engineering and, increasingly, the environment. The general public and the geological community will be familiar with the examples cited where this is the case: Hibernia, the decommissioning of the Long Harbour phosphorous plant, and the jet fuel spill in 1988 in Goose Bay. Other examples will not be so familiar: the North Warning System short range radar network in Labrador and off the tip of Baffin Island, individual studies to identify armour stone sources for marine projects, and rock slope stability assessments such as that carried out in Western

Brook Pond, Gros Morne National Park. These projects collectively demonstrate the wide range in areas of specialization that exists for geologists in the province.

Case histories of applied structural geology, hydrogeology in engineering and environmental sectors (e.g., design implications of groundwater flow, the behaviour of contaminants in the subsurface) and terrain analysis are discussed. The diversity of geological assignments in the province is demonstrated in an ironic way. At the very time that a team of geotechnical engineers and geologists were investigating the Hibernia GBS site on the Grand Banks, from which crude oil has not yet begun to flow, another group was applying hydrogeological expertise to delineate the extent of refined petroleum, in this case gasoline, which had been released to the subsurface and eventually led to building evacuations in downtown St. John's.