

## **Petroleum Exploration in Canada's Northern Regions – History, Current Activity and Future Potential**

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Northern Canada can be divided into 5 broad regions or 'petroleum provinces': 1) Mainland N.W.T/Yukon, 2) Mackenzie/Beaufort Basin, 3) Arctic Islands, 4) Hudson Platform/Foxe Basin and 5) Eastern Arctic Shelf. Within three of these regions, specific basins have already been proven to contain significant hydrocarbon deposits, while in the other two exploration activity has been minimal at best. Further, compared to the Western Canada Sedimentary Basin, drilling activity north of 60° has been miniscule (less than 1600 wells versus over 400,000 wells). The objectives of this presentation are to : 1) Review the history and current activity of petroleum exploration in each of these 'petroleum provinces' and 2) Highlight those basins (sub-regions) having favorable potential, and which may be viable/accessible for future development by both major and intermediate E & P companies.

It can be shown that the historical pattern of drilling activity is related primarily to government initiatives and political developments, and to a lesser extent to environmental and logistical challenges. The Mackenzie Delta/Beaufort region and Arctic Islands appear highly primed for future exploration/development given the discovered resources and the favorable estimates of ultimate resource potential proposed by various probabilistic and statistical methods. Basins within the Yukon and Mainland Northwest Territories have also undergone relatively extensive drilling activity, resulting in the discovery and development of significant oil and gas fields (ie: Norman Wells, Kotaneelee). The Hudson Bay and Foxe Basin regions have received little exploration activity to date. This limited activity is also discussed in the context of setting the stage for all of the detailed presentations on the five 'petroleum provinces' which follow.