Laser ablation ICP-MS geochronology of the Dog Bay Line area, Newfoundland, with respect to the Botwood Basin gold occurrences

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The scope is to provide provenance zircon data studies for samples from those of the Badger, Botwood, Davidsville and Indian Islands groups (BBDI) from the Notre Dame Bay to Gander Bay region located on either side on the Dog Bay Line area using the LAM-ICP-MS as a geochronometer.

The BBDI samples are of interest because the Dog Bay Line denotes the boundary between opposed sides of the ancient Iapetus Ocean and therefore the samples should reflect relative Laurentian and Gondwanan detrital influences. The determination of provenance will have important implications for the exploration of the Botwood Basin sediment-hosted disseminated gold occurrences by defining absolute ages for the hosts to mineralization and their tectonic depositional environments.