

**Candidates for rocks of the Appalachian Central Mobile Belt  
in the Aspy Terrane of Cape Breton Island, Nova Scotia**

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The four-fold division of pre-Carboniferous geology of Cape Breton Island implies that the Central Mobile Belt (CMB) of the Canadian Appalachians in the Cape Breton Highlands (CBH) is represented by the Aspy Terrane. The occurrence of rocks in the Aspy Terrane equivalent to those occurring in the CMB of southwest Newfoundland supports this interpretation.

The "Cape North Group", as exposed along the north shore of the CBH, can be divided into at least two distinct lithological assemblages. The western assemblage comprises marble that is tectonically interleaved with thinly-banded amphibolite, hornblende and kyanite-garnet schist, intruded by tonalite, diorite and gabbro. This assemblage resembles the highly deformed slivers of the Fleur de Lys Supergroup and associated plutons in the Notre Dame Subzone in southwest Newfoundland. The eastern assemblage comprises psammites, semipelites and felsic orthogneisses injected by abundant amphibolite, which together are intruded by granite and granodiorite. This assemblage is interpreted as an equiva-

lent of the Port aux Basques gneisses in southwest Newfoundland.

The Jumping Brook Metamorphic Suite (JBMS) in the western CBH mainly comprises the Faribault Brook pillow basalts and metaturbidites. The basalts are tholeiites with a transitional VAB/MORB geochemical composition. The JBMS is lithologically and geochemically distinct from dated Early Silurian units in the Aspy Terrane, but closely resembles the Middle Ordovician Bay du Nord and Harbour le Cou groups of the Exploits Subzone in southwest Newfoundland.

The Cheticamp Lake Gneiss in the Warren Brook area of the eastern CBH consists of meta-arkosic sandstone and conglomerate. It may lie unconformably on rocks of the Avalon Composite Terrane. The youngest detrital zircons in the gneiss are ca. 490 Ma and the detrital zircon population is similar to that in Gander Zone rocks in Newfoundland and New Brunswick. Hence, we tentatively consider the unit as an Ordovician member of the CMB.