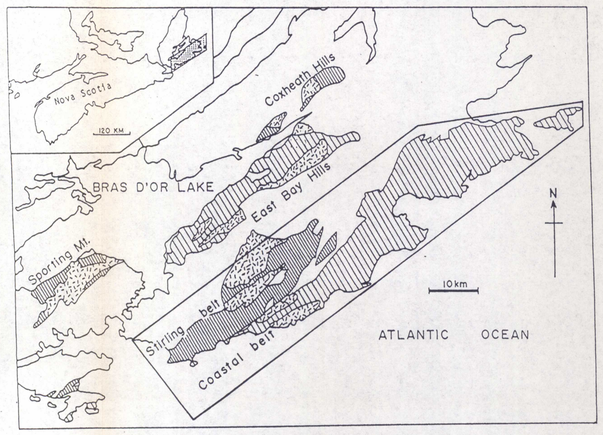
GEOLOGICAL SURVEY OF CANADA COMMISSION GÉOLOGIQUE DU CANADA

LOCATION MAP



Map showing the distribution of the Fourchu Group (diagonal lines) and associated plutonic rocks (random line pattern) in southeastern Cape Breton Island. Approximate area covered by the accompanying maps is outlined in black.

60°30'00" 45°52'30"

60°15'00" 45°52'30"

60°45'00" 45°45'00"

45°45'00"

45°33'30" 60°45'00"

45°33'30" 60°30'00"

60°15'00"

Contribution to Canada-Nova Scotia Mineral Development Agreement 1984-89, a subsidiary agreement under the Economic and Regional Development Agreement. Project funded by the Geological Survey of Canada.

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Nova Scotia Department of Mines and Energy

Energy, Mines and Resources Canada / Énergie, Mines et Ressources Canada

Canada

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GEOLOGICAL MAPS OF THE COASTAL AND STIRLING BELTS, SOUTHEASTERN CAPE BRETON ISLAND, NOVA SCOTIA

Scale 1:50 000 - Échelle 1/50 000

Kilometres 0 1 2 3 4 Kilomètres

Universal Transverse Mercator Projection

Projection transverse universelle de Mercator

REFERENCES

Barr, S.M., Macdonald, A.S., and White, C.E. 1988: The Fourchu Group and associated granitoid rocks, Coxheath Hills, East Bay Hills, and Southwestern Stirling and Coastal belts, southeastern Cape Breton Island, Nova Scotia. Geological Survey of Canada Open File 1759.

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Smith, P.K. 1978: Geology of the Giant Lake area, southeastern Cape Breton Island, Nova Scotia; Nova Scotia Department of Mines and Energy, Paper 78-3, 21 p.

Weeks, F.J. 1954: Southeast Cape Breton Island, Nova Scotia; Geological Survey of Canada, Memoir 277, 112 p.

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MARGINAL NOTES

These maps cover pre-Middle Cambrian rocks of the Coastal and Stirling belts of southeastern Cape Breton Island (Fig. 1). They represent a continuation of mapping previously reported by Barr et al. (1988), which also included the East Bay and Coxheath Hills belts. Maps of the Sporting Mountain area (Fig. 1) were previously filed by Sexton (1985), and together these maps represent a re-mapping of all of the rocks assigned by Weeks (1954) to the Fourchu Group, as well as associated plutonic rocks. The present map sheets supercede map sheets of Barr et al. (1988) in the southwestern parts of the Stirling and Coastal belts.

In the Coastal and Stirling belts, Late Precambrian to Cambrian rock units are here divided into three main groups informally termed the Coastal belt, Stirling belt, and Main a Dieu sequence. The units of the Coastal belt are mainly well cleaved crystal, lithic-crystal, and crystal-lithic tuffs. The Stirling belt includes some tuffs similar to those in the Coastal belt, but also abundant sedimentary rocks, all of which tend to be less cleaved than those in the Coastal belt.

The Main a Dieu sequence is a new grouping of map units mainly included by previous workers (e.g. Weeks, 1954; Murphy, 1977) in the Fourchu Group of the Coastal belt. The Main a Dieu units occur mostly in the northern and western parts of the Coastal Belt. This sequence of rocks generally differs from other rocks of the Coastal Belt in that:

1. Cleavage is typically less prominent.

2. Sedimentary and re-worked volcanogenic rocks are a dominant lithological component, in contrast to the rest of the Coastal belt in which such rocks are rare.

3. Crystal tuffs are rare, and clasts in lithic tuffs tend to be rounded so that they are transitional to conglomerate.

In the first two respects, the Main a Dieu sequence is more like the Stirling Belt, and it may be in part correlative with units in the Stirling Belt. The Main a Dieu sequence is inferred to be younger than the rest of the Coastal Belt, and perhaps late Hadrynian to early Cambrian in age.

These three main groups of units are overlain by sedimentary rocks inferred to belong to three age groups (in part following Weeks, 1954, and Smith, 1978): lato Hadrynian - early Cambrian, early to middle Cambrian, and Carboniferous.

A variety of mafic to felsic plutonic units are present, mainly within the late Hadrynian to early Cambrian units.

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1989

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