

LEGEND

This legend is common to maps 1978A, 1980A, 1981A, 1982A, 1983A, 1984A, and 1985A. All units and symbols may not appear on all maps.

INTRODUCTION This map is one of a set of seven bedrock geologic maps which present the results of 1:50,000 scale mapping by the Geological Survey of Canada (GSC) in the Frobisher Bay area (Map 1978A, 1980A, 1981A, 1982A, 1983A, 1984A, and 1985A).

TECOTONOSTRATIGRAPHIC UNITS (Level 2)
Gauglik Group (Unit Fth)
The Gauglik Group (Unit Fth) comprises highly deformed semipelite, pelite, quartzite, and amphibolite which predominantly outcrop along the northern shore of Big Island and on islands in White Strait (Map 1984A, Fig. 2).

GEOLOGICAL FRAMEWORK
Trans-Hudson Orogen
The metamorphic rocks and orophogenesis of the project area (Fig. 1, 2) are part of the northeastern Quebec-Baffin Island segment of the Paleoproterozoic Trans-Hudson Orogen (Fig. 1; Lewis and Staffler, 1990) which comprises tectonostratigraphic assemblages accumulated on, or accreted to, the northern edge of the Archean Superior Province during the last 200 Ma of tectonic activity (Lucas and St-Onge, 1992; Lucas et al., 1992, 1993, 1995, 1996, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006).

TECOTONOSTRATIGRAPHIC UNITS (Level 3)
Palaeoproterozoic
Ordnovician limestone
Archean
Superior Province
North Atlantic craton
Cumberland batholith
Blanford Bay assemblage
Lake Harbour orthogneiss
Ramsay River orthogneiss

Mata Inooginita Peninsula
This area is characterized by three orogenic arcs, stacked tectonically (Fig. 4; Woodliff and Scott, 1997, 1998). From lowest to highest structural level, these include the following map units: (1) Superior Province; (2) Mata Inooginita; (3) Frobisher Bay; (4) Blanford Bay; (5) Lake Harbour; (6) Blanford Bay assemblage; and (7) Cumberland batholith.

TECOTONOSTRATIGRAPHIC UNITS (Level 4)
Superior Province (Unit A)
This unit is characterized by a wide range of mafic and ultramafic rocks, including gabbro, diorite, and anorthosite. It is generally considered to be a fragment of the Superior Province, which was accreted to the northern margin of the Archean Superior Province during the Paleoproterozoic orogeny.

TECOTONOSTRATIGRAPHIC UNITS (Level 1)
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REFERENCES
Blackadar, R.G. 1967. Geological reconnaissance, southern Baffin Island, District of Franklin, Geological Survey of Canada. Paper 6447, 27 p.
Dawson, W.L. 1990. Late Proterozoic Tectonics, Geological Survey of Canada, Map 1990-20, scale 1:50 000.
Dunphy, J.M. and Ludden, J.M. 1980. Petrological and geochemical characteristics of a Paleoproterozoic magmatic arc (Frobisher Bay, eastern Ungava Orogen, Canada) and comparison to Superior Province granulites, Precambrian Research, v. 9, p. 129-142.

REFERENCES
Lucas, S.B., St-Onge, M.R., Parham, R.R., and Dunphy, J.M. 1991. Long-lived continent-ocean interaction in the Early Proterozoic Ungava Orogen, northern Quebec, Canada. Geological v. 20, p. 113-116.
Machado, N., David, S., Scott, D.J., Larroche, D., Phillips, S., and Garland, C. 1993. LITHO-geology of the western Cape Smith Belt, Canada. Scale 1:50,000 and age of initial rifting and arc magmatism. Precambrian Research, v. 55, p. 211-224.

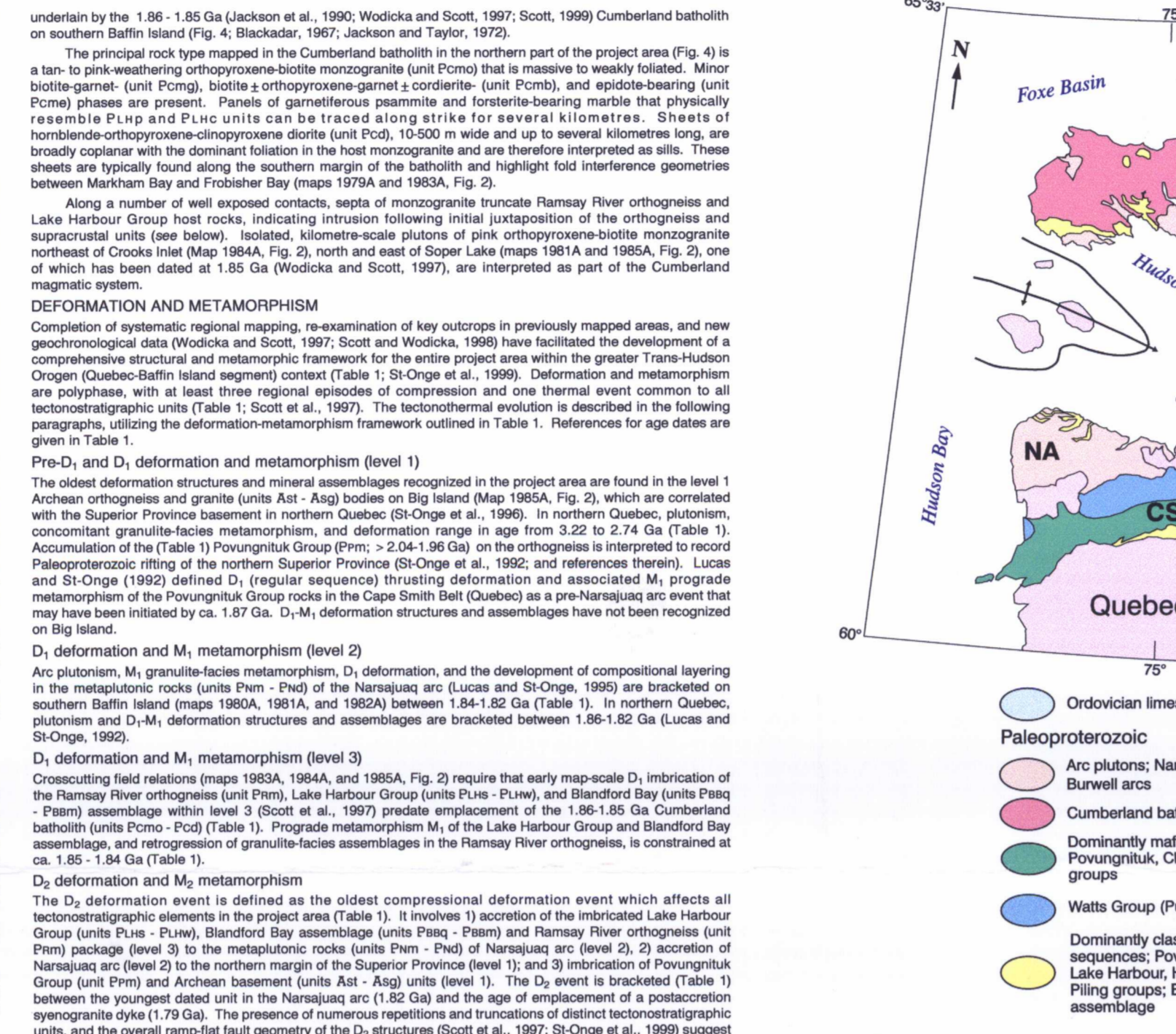


Figure 1. Geology of the Hudson Strait area (modified from Wheeler et al., 1996). Line segments A-B, C-D, and E are lines of section for the composite section shown in Figure 4. Abbreviations: Bl - Blanford Bay; CB - Cumberland batholith; CSB - Cape Smith Belt; NA - Nauyasag arc.

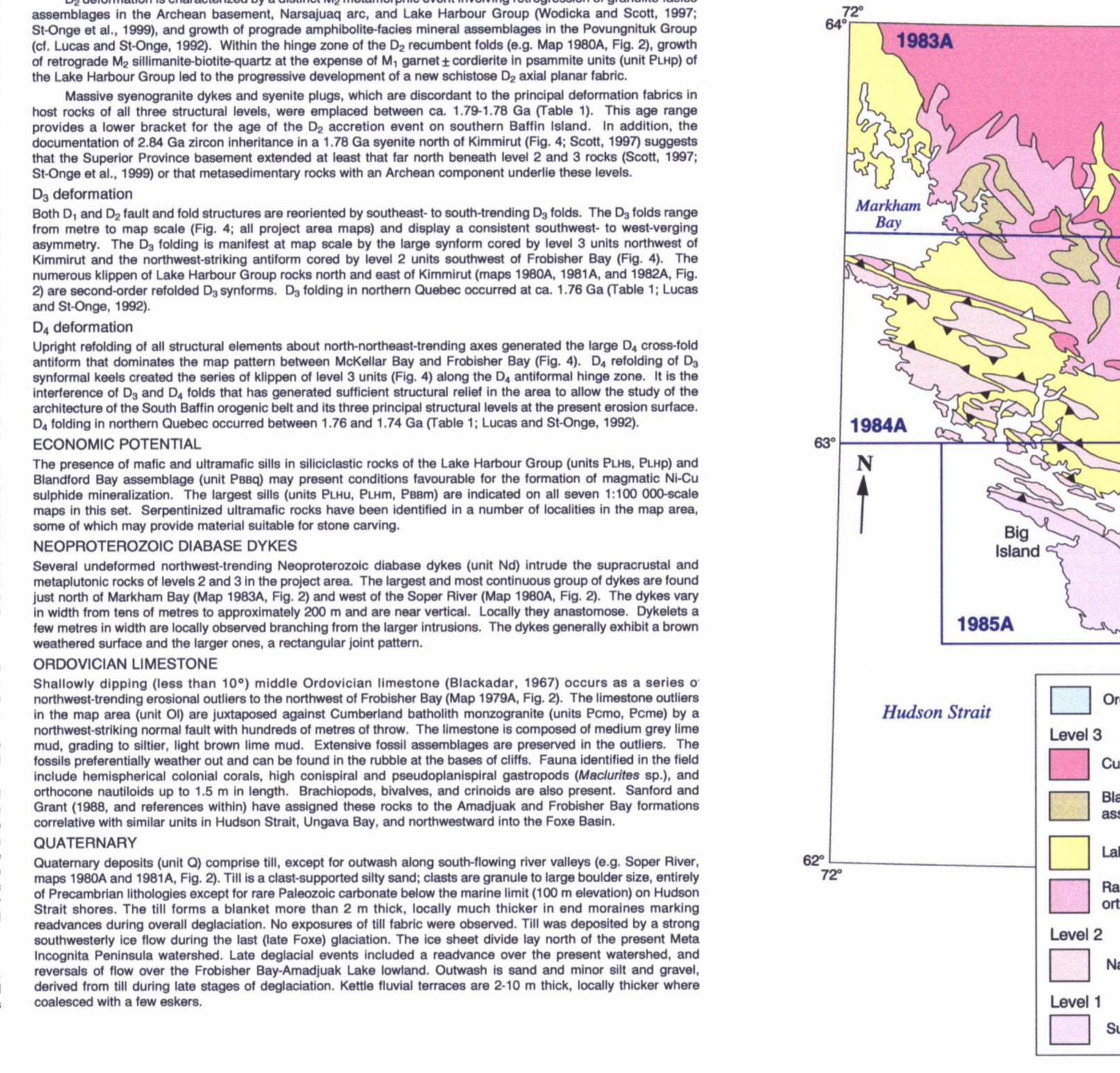


Figure 2. Generalized geology of the project area on Mata Inooginita Peninsula, Baffin Island, and location of map sheets.

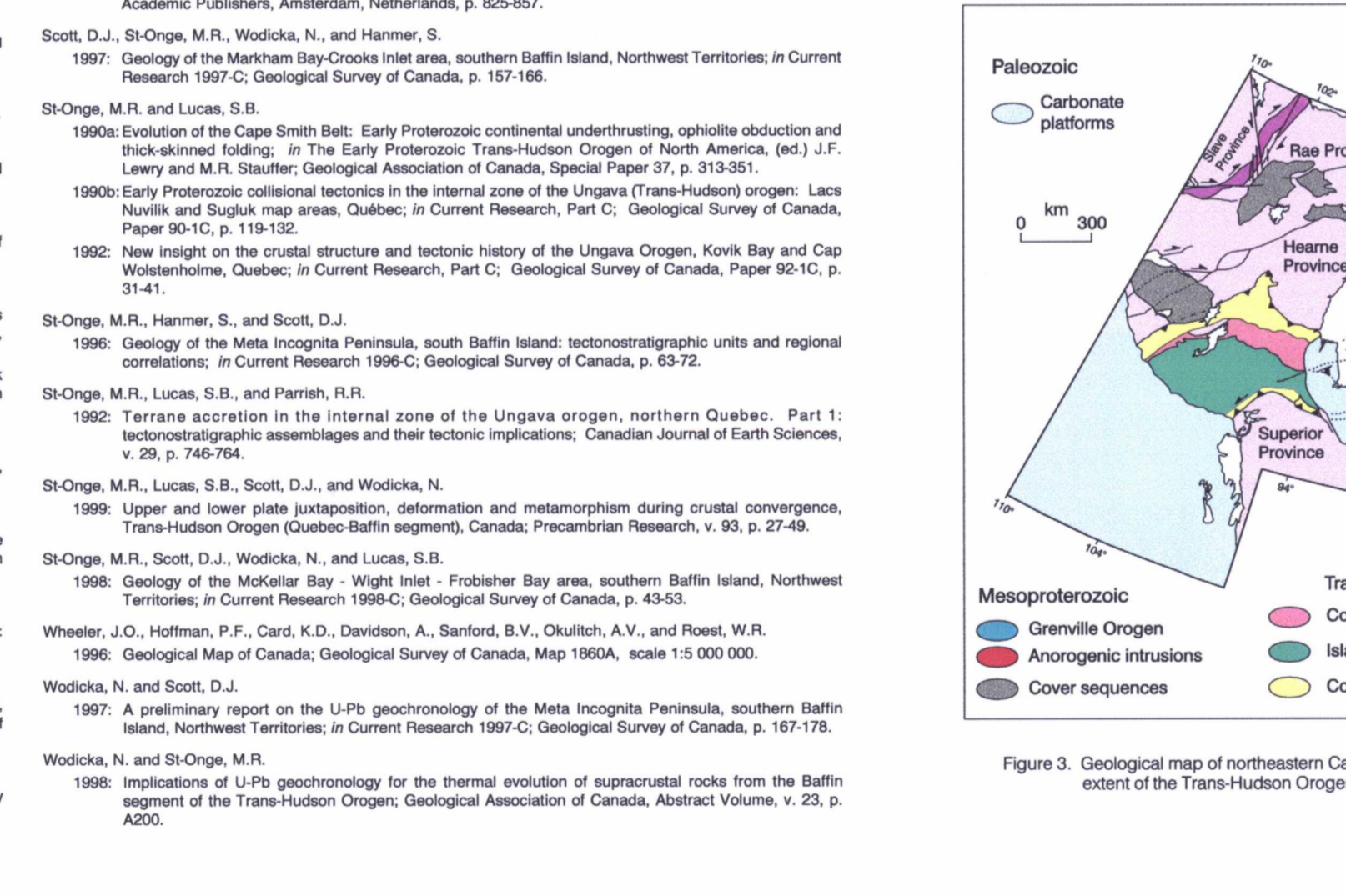


Figure 3. Geological map of northeastern Canada (modified from Wheeler et al., 1996) outlining the surface extent of the Trans-Hudson Orogen.

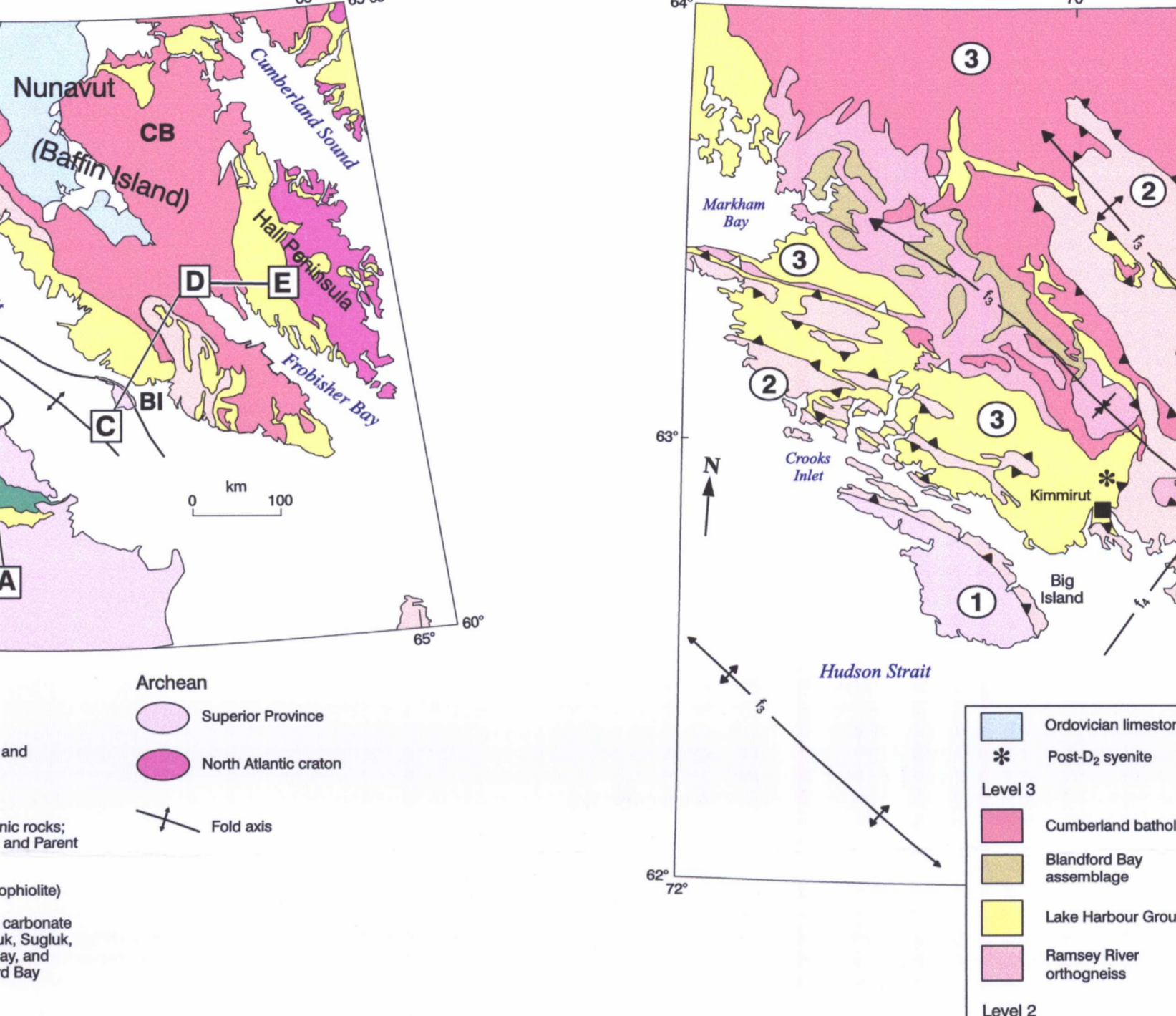


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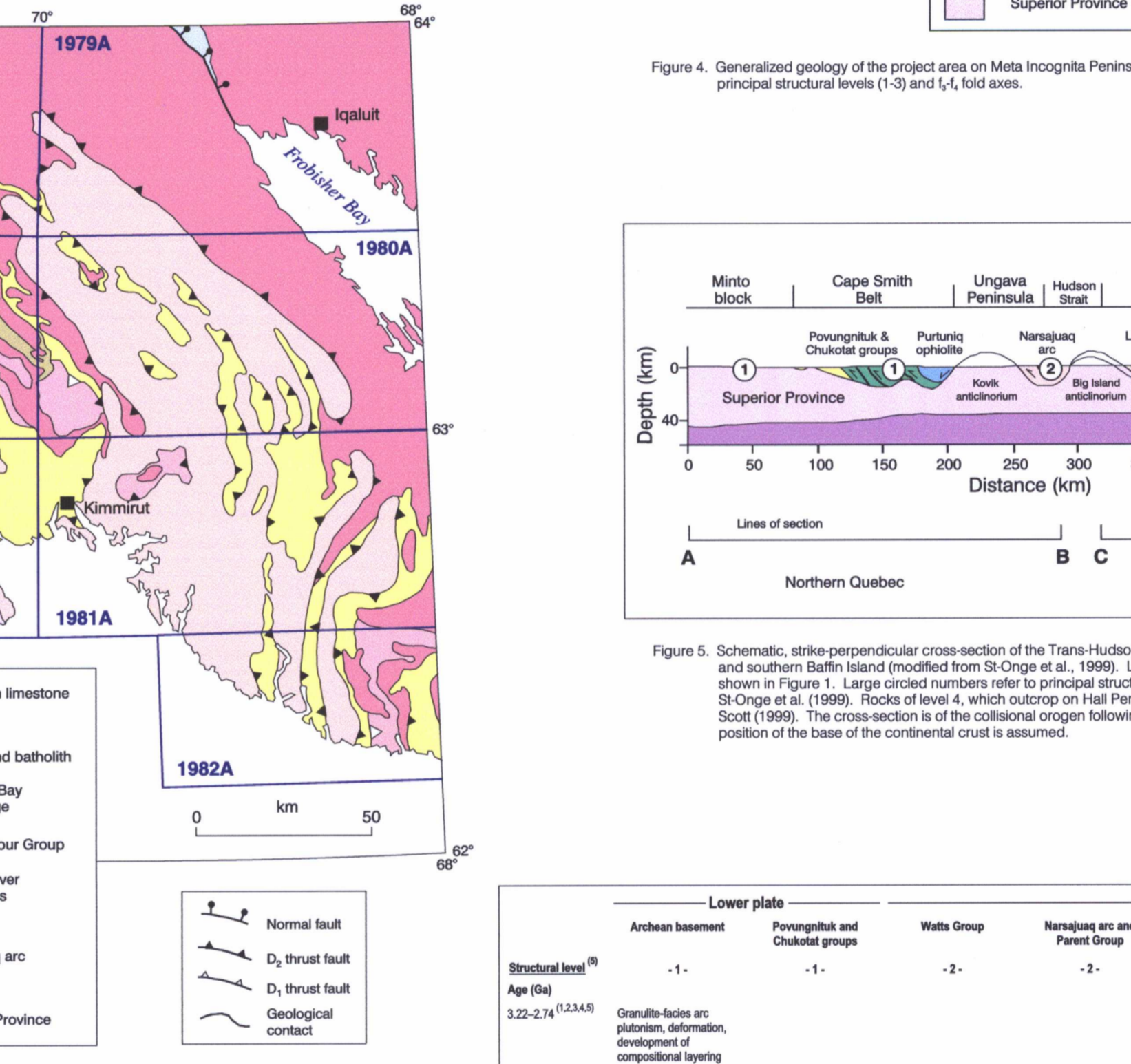


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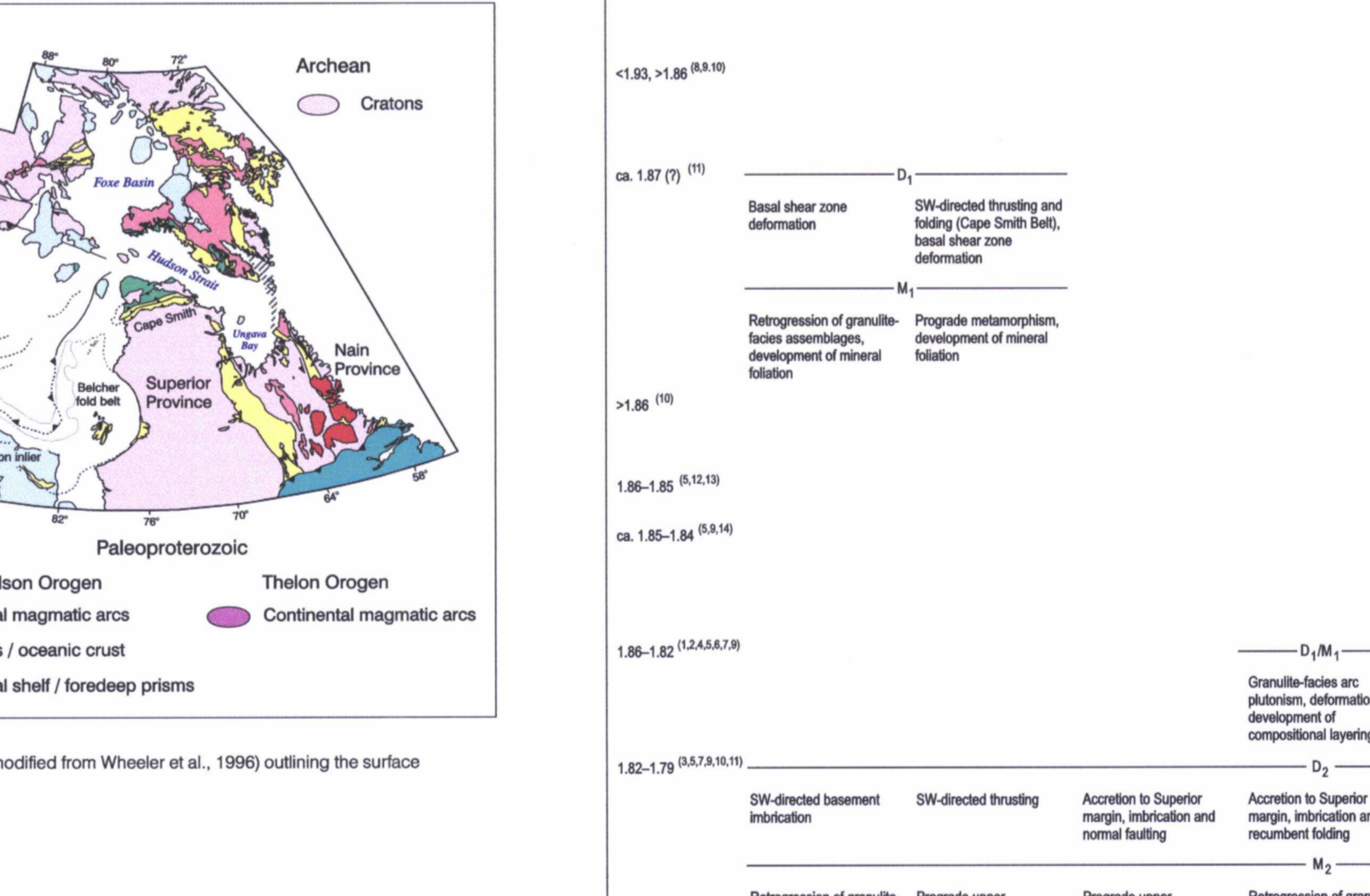


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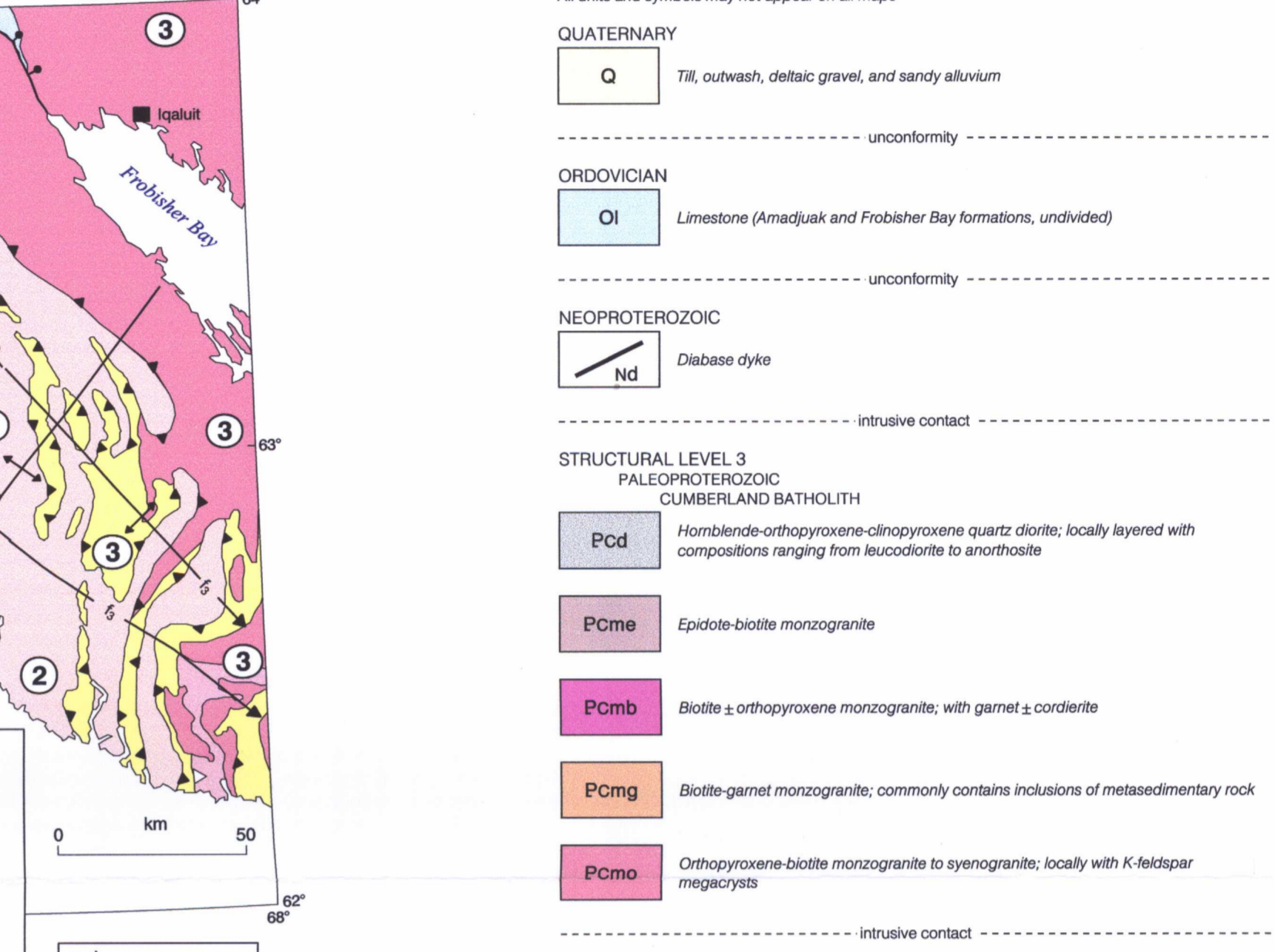


Figure 4. Schematic, strike-perpendicular cross-section of the Trans-Hudson Orogen in northern Quebec and southern Baffin Island (modified from St-Onge et al., 1999). Lines of section A-B, C-D, and E are shown in Figure 1. Large circled numbers refer to principal structural levels described in text and in St-Onge et al. (1999). Rocks of level 4, which outcrop on Hall Peninsula, Fig. 3, are described in Scott (1999). The cross-section is of the collisional orogen following orogen-parallel folding. The position of the base of the continental crust is assumed.

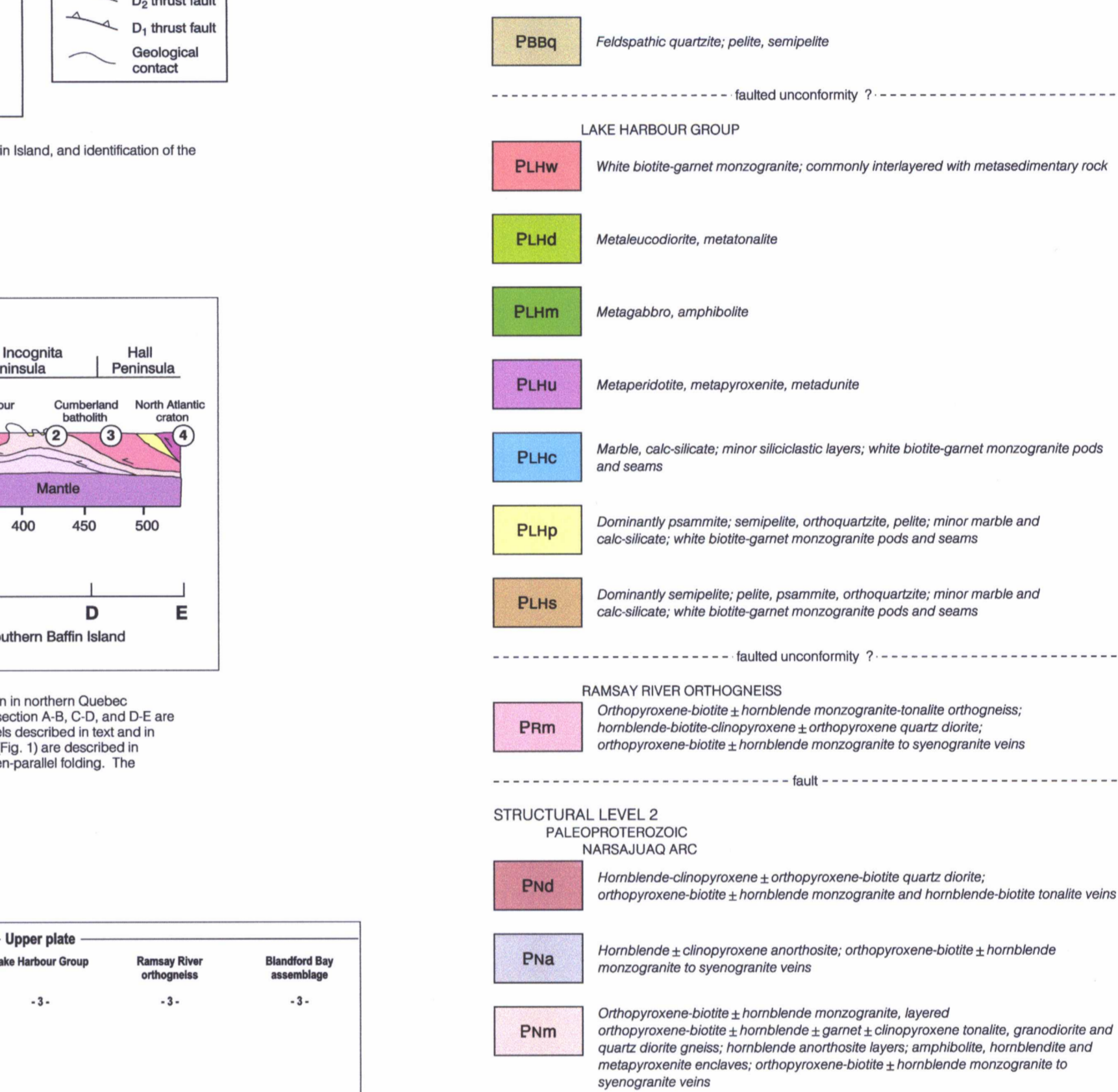


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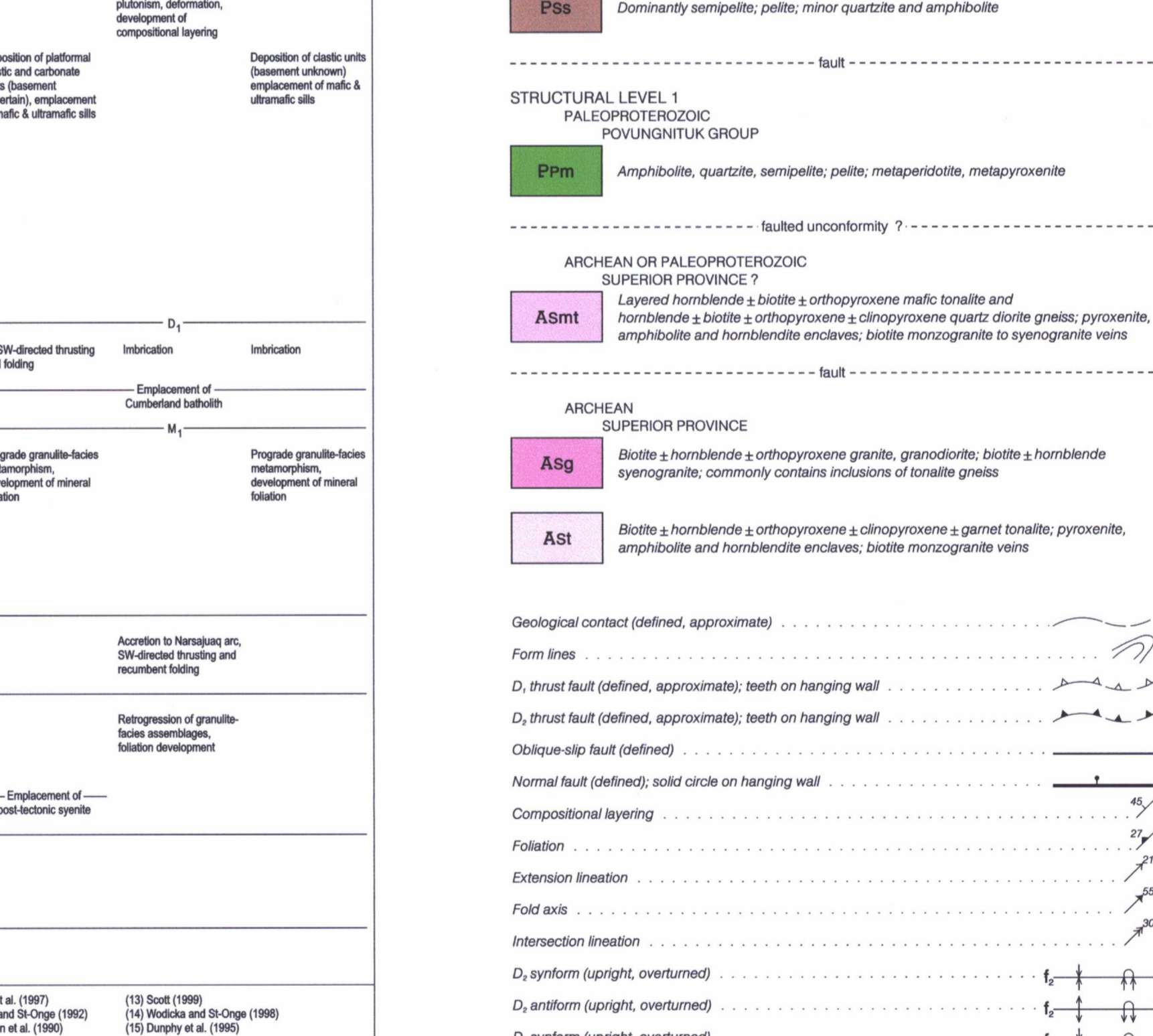


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