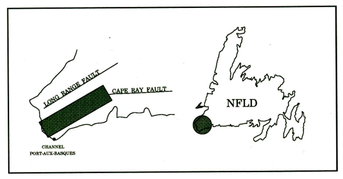
CAPE RAY FAULT ZONE
SW NEWFOUNDLAND

Map produced by **Benoît Dubé and Kathleen Lauzière, 1995**

Base map digitized by L. Dubé from parts of 1:50 000 scale maps 11-O/10, 11-O/11, 11-O/14, 11-O/15

Computer graphics by M. Boutin

Quebec Geoscience Center (CGQ)



Location map

0 0.5 1.0 1.5 2.0 2.5 3.0 Kilometers

Scale 1:20 000

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GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA
1995

COOPERATION
COOPERATION AGREEMENT ON MINERAL DEVELOPMENT
ENTENTE DE COOPÉRATION SUR L'EXPLORATION MINÉRALE
Canada
Newfoundland Terre-Neuve

Natural Resources Canada Ressources naturelles Canada

GEOLOGICAL SURVEY OF CANADA COMMISSION GÉOLOGIQUE DU CANADA

cgq centre géoscientifique de québec

Compiled from:

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1977: Geology of the Port aux Basques map area (11 O/11) Newfoundland, Newfoundland Department of Mines, Report 77-2, 11p.

Chorlton, L.B.,
1983: Geology of the Grandys Lake area (11 O/11), Newfoundland: part I: Geology of the southern Long Range Mountains. Newfoundland Department of Mines, Report 83-7, 116 p.

Tuach, J.,
1988: Cape Ray, Geologic compilation, Internal Report for Dolphin Explorations Ltd., Map-005-2875-2.

Tuach, J.,
1989: Northquest Project, Internal Report for Dolphin Explorations Ltd., Map 005-3261-22.

Wilton, D.H.C.,
1983: Metallogenic, tectonic and geochemical evolution of the Cape Ray fault zone, with emphasis on electrum mineralization: unpublished Ph. D. thesis, Memorial University, Newfoundland, 618p.

LEGEND

Post-Early to Mid Devonian

- Hydrothermal breccia, and cataclastic rocks.
- 10 Strike-slip mylonite (in Strawberry Granite)

Early to Mid Devonian

- Devonian granites
- 9 Isle aux Morts Granite] medium- to coarse-grained, equigranular to alkali feldspar-
- 8 Strawberry Granite] porphyritic, white to red biotite granite to granodiorite

Late-Silurian to Early Devonian

- 7 Strike-slip mylonite (in the WPG, and/or in CRIC)
- 6 Mylonite (in the WPG)

Early Silurian

- 5 Windowglass Hill Granite (WGH)

Ordovician and Silurian

- 4 Windsor Point Group: Bimodal volcanic and volcaniclastic rocks with associated sedimentary rocks (WPG)
- 4b Windsor Point Group (Silurian)
  - 4b1 Quartz-feldspar porphyry, felsic volcaniclastics
  - 4b2 Mafic volcaniclastics
  - 4b3 Conglomerate, polygenic to monogenic
  - 4b4 Greywacke, shale and pebbly sandstone
  - 4b5 Black shale and/or graphitic shale
  - 4b6 Limestone
  - 4b7 Gabbro
  - 4b8 Chlorite-sericite schist and chlorite schist
  - 4b9 Quartz-sericite schist
- 4a Ordovician to Silurian (Little Barachois Formation)
  - 4a1 Rhyolite and associated pyroclastic and epiclastic rocks, locally quartz-feldspar-phyric
  - 4a2 Polygenic conglomerate with abundant felsic volcanic clasts, typically magnetic
  - 4a3 Graywacke and siltstone
  - 4a4 Black shale and graphitic shale
  - 4a5 Mafic volcanic, mostly massive, locally pillowed and brecciated with magnetic jasper fragments
  - 4a6 Limestone
  - 4a7 Sericite and/or chlorite schist

Silurian and older

- 3 Rose Blanche phase (Silurian)
  Schistose to gneissic granitoid including tonalite, granodiorite and minor granite containing biotite and subordinate muscovite. Locally pegmatitic. Containing many country rocks screens.
- 2 Port aux Basques Gneiss (Ordovician and older): 2I Grand Bay Complex (GBC), 2II Port aux Basques Complex (PBC)
  Mainly semi-pelitic and pelitic schists, psammite and quartzo-feldspathic gneiss and mylonite, with minor amphibolite and pegmatitic intrusions
  - 2a Semi-pelitic schist, mostly biotite-muscovite schist, locally gneissic, minor amphibolite and pegmatitic intrusions
  - 2b Pelitic to semi-pelitic schist, psammite and phyllonite
  - 2c Granitic gneiss
  - 2d Quartzo-feldspathic gneiss, commonly mylonitic, includes muscovite-sericite schist
  - 2e Amphibolite and retrograde chlorite schist
  - 2f Chlorite and chlorite-sericite schist

Ordovician

- 1 Cape Ray Igneous Complex (CRIC)
  Tonalite and other granitoid rocks with gabbroic enclaves

SYMBOLS

- a) b) Geological boundary a) defined, b) interpreted
- High-strain contact
- High-angle thrust fault
- Interpreted thrust fault
- Transitional boundary
- Strike-slip fault
- Fault
- outcrop visited
- trench
- mineral showing
- carbonate alteration zone
- Ar-Ar (Hb) 406 ± 4Ma geochronological sampling, sample location, age and geochronological method used

Abbreviations:

And	andalusite
ank	ankerite
Bt	biotite
Ct	calcite
Cp	chalcopyrite
Chl	chlorite
Ep	epidote
Fl	fluorite
Gn	galena
Gr	garnet
Gp	graphite
Au	gold
Hem	hematite
Hb	hornblende
ja	jasper
ICb	Iron carbonate
Mag	magnetite
Mu	muscovite
Py	pyrite
Ky	Kyanite
P	retrograded
PR	partly retrograded

- bedding (WPG)
- S_{1-2} fabric (GBC)
- a) b) S_{3a} fabric a) WPG b) CRIC
- a) b) S_{3b} fabric a) GBC, b) WPG
- mylonitic foliation (S_4)
- crenulation cleavage (S_5-S_5')
- stretching lineation, measured on foliation surface
- mineral lineation, measured on foliation surface
- intersection lineation, measured on foliation surface
- crenulation lineation, measured on foliation surface
- a) b) c) d) e) shear with displacement a) unknown b) dextral, c) sinistral, d) reverse, e) normal
- a) b) c) fault with displacement a) unknown b) dextral, c) sinistral.
- striations on fault surface
- a) b) c) minor fold with axial plane a) S-shaped b) Z-shaped and c) M shaped
- a) b) c) minor fold with axial plane and fold axis a) S-shaped b) Z-shaped and c) M-shaped
- a) b) axial plane surface a) without and b) with fold axis
- a) b) c) kink bands a) dextral b) sinistral c) and plunge
- Vein
- a) b) c) SC mylonitic fabric a) dextral, b) sinistral, c) reverse
- a) b) c) shearbands a) dextral, b) sinistral, c) reverse