ASSEMBLAGE AGE, PERIOD: Series (Stage, Absolute age range)

ASSEMBLAGE NAME: *Assemblage description, in the following form: major rock types; minor rock types; [optional: ± other components]; [optional: ± sedimentary structures]; metamorphic rock units that allow correlation and synthesis of lithological continuity on a regional scale.*

1 Separately distinguished and described components of the assemblage are indicated by units ("...bed", "...member", "...succession", "...complex" names are indicated in bold text); minor rock types and features; rare rock types and features; or settings; (each constituent, with names indicated in bold text) is a formation, unless indicated otherwise as "...group", "...member",

2 Where mappable, some units within an assemblage are distinguished by their own colour to add detail and clarity to the map.

PLUTONIC ASSEMBLAGE AGE, PERIOD: Series (Stage, Absolute age range)

PLUTONIC ASSEMBLAGE NAME: *Plutonic assemblage description, in the following form: major rock types; minor rock types; [optional: ± other components]; [optional: ± metamorphic features]; metamorphic rock units that allow correlation and synthesis of lithological continuity on a regional scale.*

1 Separately distinguished and described components of the assemblage are indicated by units ("...bed", "...member", "...succession", "...complex" names are indicated in bold text); minor rock types and features; rare rock types and features; or settings; (each constituent "...suite", "...swarm", "...intrusion", "...intrusive complex" names are indicated in bold text).

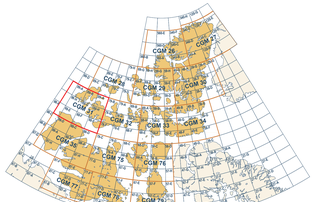
2 Where mappable, some units within an assemblage are distinguished by their own colour to add detail and clarity to the map.

For clarity at this map scale, not all units in the legend are indicated separately on the map. For example, units of the Sylvester Bay assemblage, Member D, Cmcd2, and Cmcd3 are amalgamated under the colour of their parent (Cm-sb).

Brackets indicate grouping of assemblages and component units by type of tectonic setting and colour coded as follows:

- red: foreland basin (flexural moat only)
- red: plutonic arc stitching plutons
- brown: fold/thrust belt-derived clastic wedge
- light green: volcanic arc (continental or oceanic)
- purple: slope and deep water settings
- light blue: shelf, (platform)
- grey: intracratonic basin
- green: large igneous province (LIP)
- dark blue: orogen, craton

Figure 1. Explanation of map unit features.



National Topographic System reference and index to adjoining published Geological Survey of Canada maps

Abstract

This map and the related geodatabase illustrate the bedrock geology of central and southern Prince Patrick Island, Eglinton Island, northernmost Banks Island, and adjacent islands in M'Clure Strait. The units on the map include the western flanks of the Middle and Upper Devonian clastic wedge associated with the Ellesmerian Orogeny, an unconformable Permo-Carboniferous strata which accumulated during rifting and subsequent sag phases of the Sverdrup Basin, and a succession of Middle and Upper Jurassic evaporite and clastic strata offset on rift tectonic events aligned with Eglinton Basin and the ancestral margin of the Arctic Ocean. Post-tectonic Neogene is widespread in the western part of the map area.

Résumé

Cette carte et la géodatabase qui s'y rapporte documentent la géologie du substratum rocheux dans le centre et le sud de l'île Prince Patrick, l'île Eglinton, la toute dernière partie septentrionale de l'île Banks et les îles avoisinantes du détroit de M'Clure. Les principales entités géologiques de la région comprennent le faciès occidental du prisme de roches clastiques du Dévonien moyen et supérieur associé à l'orogène ellesmérien, et les strates permo-carbonifères discordantes qui se sont accumulées pendant le rifting et l'inversion tectonique subséquents. La stratigraphie du Mésozoïque témoigne d'une deuxième phase de rifting (jurassique moyen et supérieur), selon la même orientation que le bassin d'Eglinton et la marge ancestrale de l'océan Arctique. Les sédiments néogènes post-tectoniques sont répandus dans la partie ouest de la région cartographiée.

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2nd edition

CANADIAN GEOSCIENCE MAP 31

GEOLOGY

TECTONIC ASSEMBLAGE MAP OF M'CLURE STRAIT

Prince Patrick, Eglinton, and surrounding islands, Northwest Territories

1:500 000

Authors: J.C. Harrison, T. Lynds, A. Ford, and A.D. Miall

Geological compilation by J.C. Harrison

Source map geology (senior authors) by J.C. Harrison and A.D. Miall

GIS development by T. Lynds

Spatial data capture by Geotech Ltd.

Cartography by M.J. Baldock

Critical review by K. Dewing

Initiative of the Geological Survey of Canada, conducted under the auspices of the Tri-Territorial Project as part of Natural Resources Canada's Geo-mapping for Energy and Minerals (GEM) program.

Map projection Lambert Conformal Conic, standard parallels 74°30'N and 76°30'N North American Datum 1983

Base map at the scale of 1:250 000 from Natural Resources Canada, with modifications.

Proximity to the North Magnetic Pole causes the magnetic compass to be erratic in this area.
Mean magnetic declination 2016: 0° 0' (readings 65.4' annually)
Readings vary from 24.5°E in the SW corner to 7°25'E in the NE corner of the map.

This map is not to be used for navigational purposes.

Title photograph: Hoodoos in Callovian sandstone, Northwest Melville Island, Northwest Territories. Photograph by J.C. Harrison, 2013-067.

The Geological Survey of Canada welcomes corrections or additional information from users.

Data may include additional observations not portrayed on this map. See documentation accompanying the data.

This publication is available for free download through GEOSCAN (http://geoscan.nrcan.gc.ca/).

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GEOLOGY

TECTONIC ASSEMBLAGE MAP OF M'CLURE STRAIT

Prince Patrick, Eglinton, and surrounding islands, Northwest Territories

1:500 000

10 5 0 10 20 30 40km

2nd EDITION

CANADIAN GEOSCIENCE MAP 31

GEOLOGY

TECTONIC ASSEMBLAGE MAP OF M'CLURE STRAIT

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Preliminary publications in this series have not been scientifically edited.