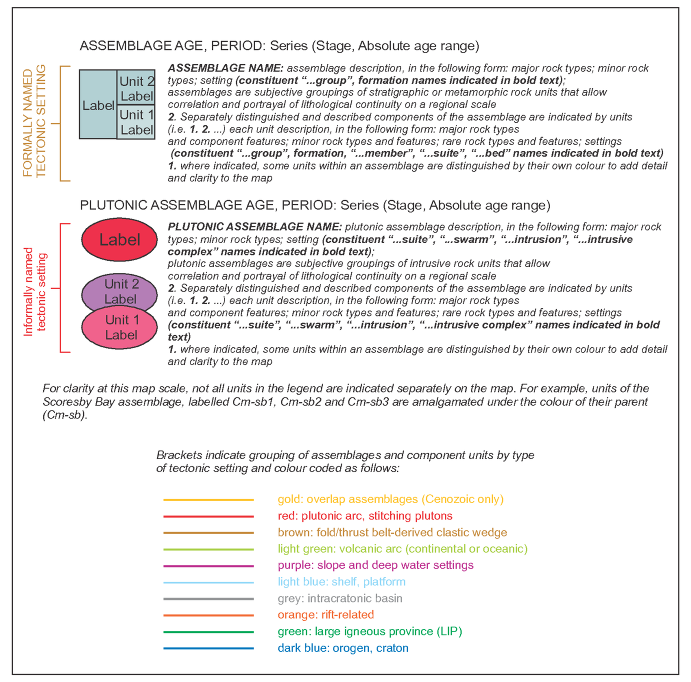
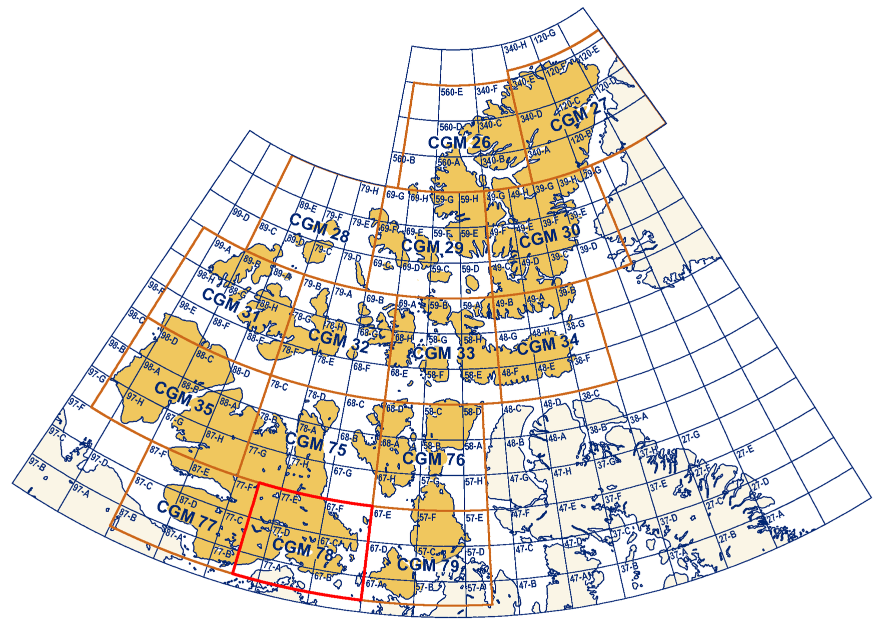


Figure 1. Explanation of map unit features.



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 southeastern Victoria Island. Most of the map area is underlain by generally flat-lying Cambrian to Silurian strata of the Arctic Platform. Also, locally documented are inliers of Neoarchean felsic plutonic rocks, unconformable clastic rock–dominated strata of the Paleoproterozoic Kilohigok Basin, Meso- and Neoproterozoic strata of Amundsen Basin, and diabase sills related to the Franklin Large Igneous Province (ca. 723 Ma).

Résumé

Cette carte et la géodatabase qui s'y rapporte documentent la géologie du substratum rocheux dans le sud-est de l'île Victoria. La majeure partie de la région de la carte recèle des strates généralement horizontales d'âge cambrien à silurien de la Plate-forme de l'Arctique. En outre, des boutonnières de roches plutoniques felsiques du Néoarchéen, des strates discordantes à prédominance de roches clastiques du bassin paléoprotérozoïque de Kilohigok, des strates mésoprotérozoïques et néoprotérozoïques du bassin d'Amundsen et des filons-couches de diabase apparentés à la grande province magmatique de Franklin (env. 723 Ma) ont été documentés par endroits.

Cover illustration
Drift cover on Paleozoic strata, Wollaston Peninsula, southwestern Victoria Island, Nunavut. Photograph by Rob Rainbird. 2013-075

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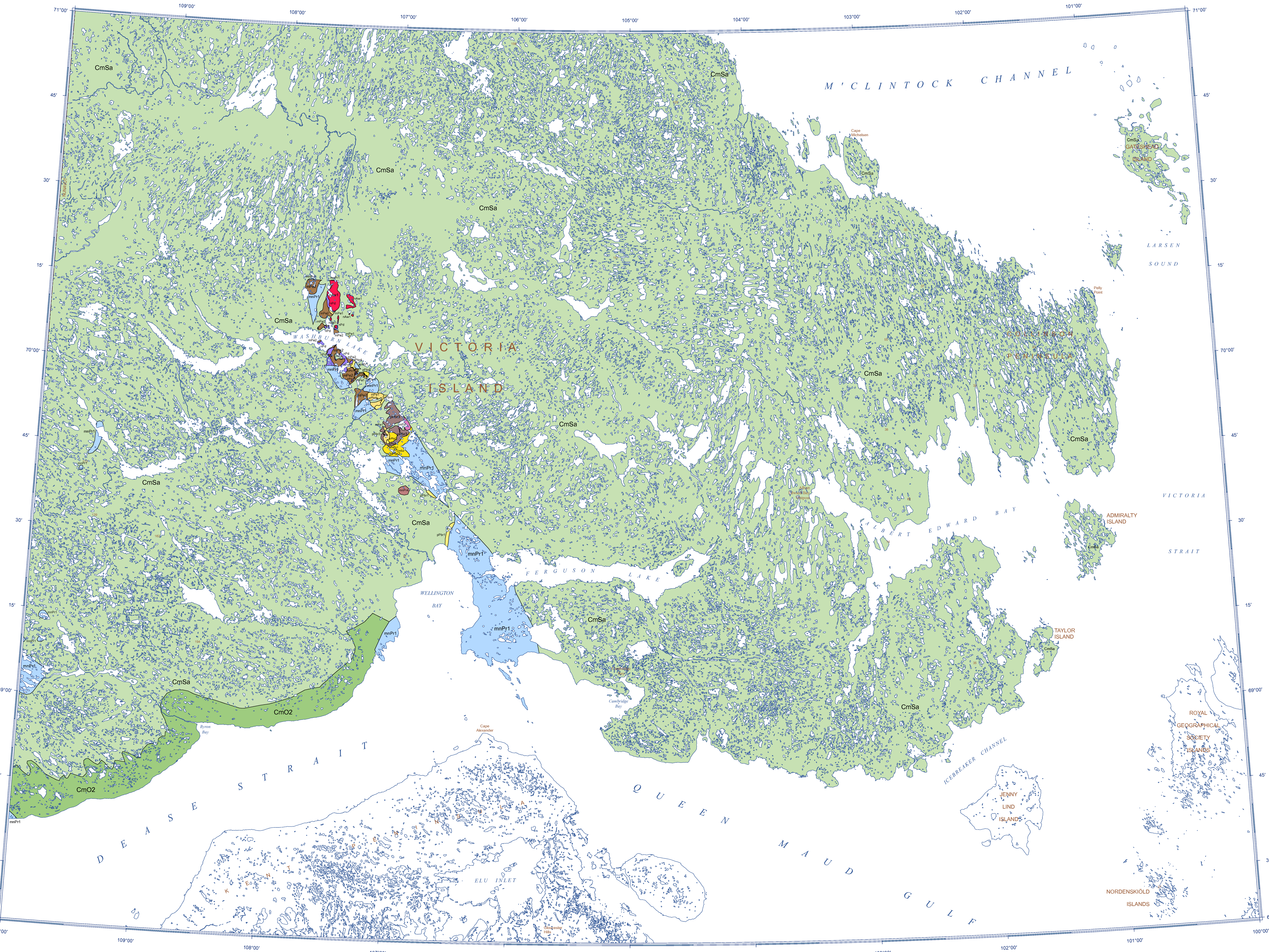
CANADIAN GEOSCIENCE MAP 78

GEOLOGY

TECTONIC ASSEMBLAGE MAP OF THE CAMBRIDGE BAY AREA

southeastern Victoria Island, Nunavut

1:500 000



CAMBRIAN TO SILURIAN

ARCTIC PLATFORM

LATE CAMBRIAN TO LUDLOW

CmSa — **ARCTIC PLATFORM:** dolostone, dolomitic limestone, limestone; minor sandstone, shale, intraclast conglomerate, breccia; nearshore and intertidal to supratidal; mostly restricted **(Turner Cliffs, Ship Point, Irene Bay Thumb Mountain, Allen Bay, Cape Storm)**.

CAMBRIAN AND ORDOVICIAN

LATE CAMBRIAN (Furongian) TO EARLY ORDOVICIAN (Tremadoc)

CmO2 — **TURNER CLIFFS:** dolostone, limestone, intraclast conglomerate; minor shale, sandstone, gypsum; local bioherms; peritidal grading to subtidal shelf.
2. Dolostone, green, grey to buff, laminated, thin- to medium-bedded, stromatolitic; sandstone, grey, white, red brown; carbonate intraclast breccia, conglomerate; nearshore to restricted shallow marine **(Turner Cliffs, lower member)**.

NEOPROTEROZOIC

FRANKLIN LARGE IGNEOUS PROVINCE

CRYOGENIAN (723 to 718 Ma)

nPd — **FRANKLIN plutonic assemblage:** Diabase, mostly high titanium tholeiite, olivine-bearing, brown to black, subophitic; plagioclase often saussuritized, olivine replaced by carbonate; local ultramafic rock; LIP intrusives, olivine tholeiite association **(Franklin and Thule swarms)**.

MESOPROTEROZOIC, NEOPROTEROZOIC

AMUNDSEN BASIN

STENIAN TO CRYOGENIAN (1033 to 723 Ma)

mnPr4, mnPr1 — **RAE:** dolostone, dolosiltite, quartz arenite, minor lithic arenite, intraclast conglomerate; clastic shelf, offshore platform and fluvial-deltaic **(Escape Rapids, Mikkelsen Islands, Nelson Head, Aok)**.
4. Siltstone, red, green; quartz arenite, fine- to medium-grained, white to pink, planar cross-stratified; minor, shale, pyritic, black; glauconitic sandstone, hummocky cross-stratified; marine prodeltaic, deltaic, fluvial **(Nelson Head)**.
1. Dolostone, dolosiltite, quartz arenite, minor lithic arenite, intraclast conglomerate; clastic shelf, offshore platform and fluvial-deltaic **(Rae group)**.

MESOPROTEROZOIC

MACKENZIE LARGE IGNEOUS PROVINCE

ECTASIAN (1270 Ma)

mPd — **MACKENZIE plutonic assemblage:** Diabase, mostly high titanium tholeiite, olivine-bearing, brown to black, subophitic; plagioclase often saussuritized, olivine replaced by carbonate **(Mackenzie swarm)**.

MESOPROTEROZOIC

ELU BASIN

ECTASIAN (1380 to 1270 Ma)

mPe2, mPe1 — **ELLICE:** quartz arenite, subarkose; conglomerate; braided fluvial or nearshore **(Ellice)**.
2. Quartz arenite, subarkose; nearshore or braided fluvial **(Ellice, members 2, 3)**.
1. Quartzite pebble conglomerate; nearshore or fluvial channel **(Ellice, member 1)**.

PALEOPROTEROZOIC

KILOHIGOK BASIN

OROSIRIAN (2050 to 1810 Ma)

pPbr5, pPbr4, pPbr3, pPbr2, pPbr1 — **BURNSIDE:** quartz arenite, sandstone; minor conglomerate, siltstone, shale; local dolostone, breccia; braided fluvial, locally unrestricted shallow marine **(Burnside River)**.
5. Sandstone, immature; dolostone.
4. Siltstone, hematitic; sandstone, fine-grained; hematized breccia with quartz veins; braided fluvial **(Burnside River, upper part)**.
3. Quartz arenite, pink to red weathering; braided fluvial **(Burnside River, middle part)**.
2. Quartz arenite, pink to purple and maroon weathering; paraconglomerate; braided fluvial **(Burnside River, lower part)**.
1. Quartz arenite, pink to purple and maroon weathering; paraconglomerate; minor siltstone and hematized breccia; braided fluvial **(Burnside River)**.

NEOARCHEAN

SLAVE CRATON

nAw1 — **WELLINGTON plutonic assemblage:** granodiorite, syenogranite, monzogranite; collisional plutonic complex.
1. Syenogranite, monzogranite; minor pegmatite **(Wellington suite)**.

Contacts
Geological boundary: defined or approximate

Faults
Fault: assumed

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Canadian Geoscience Maps

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GEOLOGY

TECTONIC ASSEMBLAGE MAP OF THE CAMBRIDGE BAY AREA

southeastern Victoria Island, Nunavut

1:500 000

10 0 10 20 30 40 km

Map projection Lambert Conformal Conic, standard parallels 68°54'N and 70°34'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 2013, 7°24'E, decreasing 35'W annually.
Readings vary from 0°16'W in the SE corner to 14°21'E in the NW corner of the map.

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

The 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/).

This map is not to be used for navigational purposes

Preliminary publications in this series have not been scientifically edited.

CANADIAN GEOSCIENCE MAP 78
GEOLOGY
TECTONIC ASSEMBLAGE MAP OF THE CAMBRIDGE BAY AREA
southeastern Victoria Island, Nunavut

Canada