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2nd
EDITION

CANADIAN GEOSCIENCE MAP 32
GEOLOGY
TECTONIC ASSEMBLAGE
MAP OF THE BYAM MARTIN
CHANNEL AREA

Melville and surrounding islands,
Nunavut–Northwest Territories



**Map Information
Document**

Preliminary

Geological Survey of Canada
Canadian Geoscience Maps

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ABSTRACT

This map and the related geodatabase illustrate the bedrock geology of eastern Melville Island, Byam Martin Island, and western Bathurst Island, including smaller islands in the same area. Major features of the area include the westerly trending salt-involved Parry Islands fold belt developed in Middle and Upper Devonian foreland basin strata, and unconformable Carboniferous and younger strata. A separate phase of salt tectonics, including diapirs of northeastern Melville Island, is associated with the evolution of the Sverdrup Basin.

RÉSUMÉ

Cette carte et la géodatabase qui s'y rapporte documentent la géologie du substratum rocheux dans l'est de l'île Melville, l'île Byam Martin et l'ouest de l'île Bathurst, ainsi que de petites îles de la région. Les principales entités géologiques de la région comprennent la zone de plissement de Parry Islands, de direction ouest, qui s'est formée dans des strates de bassin d'avant-pays du Dévonien moyen et supérieur, et dont le style structural a été influencé par la présence de couches de sel; et des strates discordantes d'âge carbonifère et plus récent. Une phase distincte de tectonique salifère, comprenant les diapirs de la partie nord-est de l'île Melville, est associée à l'évolution du bassin de Sverdrup.

ABOUT THE MAP

General Information

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

Geological compilation by J.C. Harrison

Source map geology (senior author) by J.C. Harrison

GIS development by T. Lynds

Spatial data capture by Geotech Ltd.

Cartography by A. Galloway

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 2015, 1°18'W, increasing 30.1' annually.

Readings vary from 13°21'E in the SW corner to 23°26'W in the NE corner of the map.

This map is not to be used for navigational purposes.

Title photograph: Folds in Devonian sandstone, central Bathurst Island, Nunavut.

Photograph by J.C. Harrison. 2013-068

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/>).

Preliminary publications in this series have not been scientifically edited.

Map Viewing Files

The published map is distributed as a Portable Document File (PDF), and may contain a subset of the overall geological data for legibility reasons at the publication scale.

Cartographic Representations Used on Map

This map utilizes ESRI Cartographic Representations in order to customize the display of standard GSC symbols for visual clarity on the PDF of the map only. The digital data still contains the original symbol from the standard GSC symbol set. The following legend features have Cartographic Representations applied:

- Fault: approximate, showing downthrown side
- Fault: assumed, showing downthrown side
- Dextral strike-slip fault: approximate
- Sinistral strike-slip fault: approximate
- Thrust fault: approximate, teeth indicate upthrust side
- Thrust fault: assumed, teeth indicate upthrust side

ABOUT THE GEOLOGY

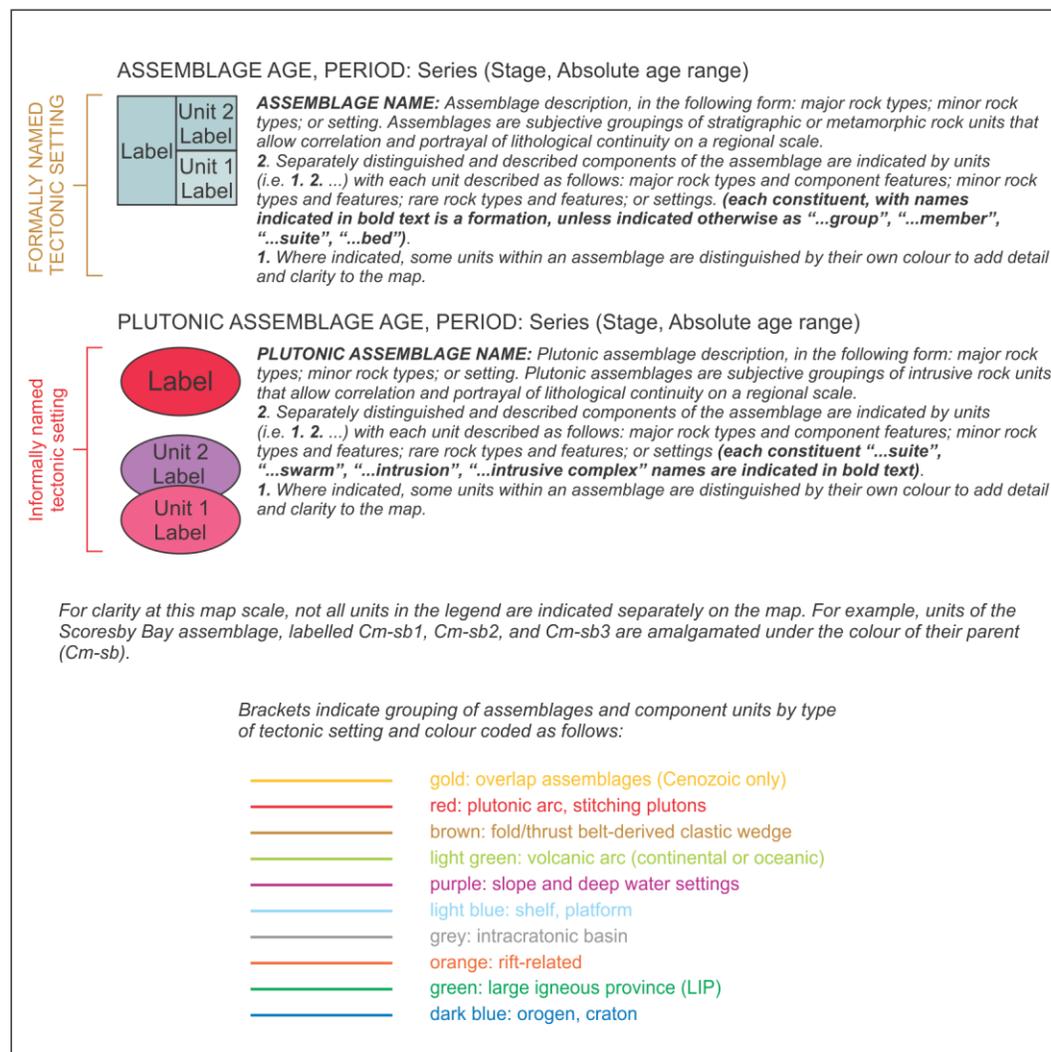


Figure 1. Explanation of map unit features.

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Author Contact

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Coordinate System

Projection: Lambert Conformal Conic
False Easting: 0.0°
False Northing: 0.0°
Central Meridian: -106.0
Standard Parallel 1: 74.5
Standard Parallel 2: 76.5
Latitude of Origin: 40.0°
Units: metres
Horizontal Datum: NAD83
Vertical Datum: mean sea level

Bounding Coordinates

Western longitude: 112°00'00"W
Eastern longitude: 100°00'00"W
Northern latitude: 77°00'00"N
Southern latitude: 74°00'00"N

Data Model Information

This Canadian Geoscience Map does not conform to the Bedrock Mapping Geodatabase Data Model v.3.1. Therefore, some of the feature classes and feature attributes require explanation. Consult "Explanation_of_attributes.rtf" in Data folder for complete description of the feature classes and feature attributes.

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