

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

Q Undifferentiated Quaternary sediments.

DEVONIAN
MIDDLE AND UPPER DEVONIAN

DHB HECLA BAY FORMATION (Little Cornwallis Island): poorly indurated, poorly exposed, fine-grained quartz arenite, locally micaceous. Thickness unknown.
HECLA BAY FORMATION (Rookery Creek): poorly indurated, poorly exposed, fine-grained quartz arenite, locally micaceous. Sparse fossiliferous intervals are trilobite-crinoid grainstone with whole atrypid brachiopods, and quartz arenite with plant remains.

MIDDLE DEVONIAN

DBI BIRD FIORD FORMATION (Little Cornwallis Island): dolomitic skeletal floatstone containing ramose bryozoa, domical stromatoporoids, and whole brachiopods, overlain by fine-grained sparsely micaceous calcareous sandstone containing brachiopods and Zoophycos burrows. Thickness unknown.
BIRD FIORD FORMATION (Rookery Creek): basal, flaggy- to platy-weathering buff- to brown-weathering dolostone (~50 m) overlain by resistant, pale grey-weathering massive fenestral lime mudstone with rare ramose bryozoa - stromatoporoid oncoid rudstone interlayers (~30-40 m).

DBL BLUE FIORD FORMATION (Little Cornwallis Island): in part, blue-grey-weathering skeletal wackestone containing trilobites, brachiopods, gastropods. Thickness unknown.

DDB DISAPPOINTMENT BAY FORMATION (Little Cornwallis Island): basal lag of angular pebbles (predominantly chert; thickness variable) overlain by fine-grained sandstone (4 m), followed by vuggy, commonly bitumenous, locally banded to laminated, fine to medium crystalline dolostone in lower half (~30 m), and with rare leached bivalves, millimetric intraclasts, vermiform voids, fenestral fabric, and hardgrounds in upper half. Estimated thickness 50 m.

LOWER DEVONIAN

Dcgl Devonian conglomerate (Little Cornwallis Island): poorly exposed and poorly lithified conglomerate of framework-supported, subrounded pebble- to cobble-sized clasts, predominantly dolostone, in dolomitic matrix. Thickness extremely variable.
Devonian conglomerate (Rookery Creek): poorly exposed and poorly lithified conglomerate of framework-supported, subrounded pebble-sized dolostone and chert clasts, in dolomitic matrix. Locally contains ramose bryozoa.

SILURIAN AND DEVONIAN

SDB BARLOW INLET FORMATION: thin- to medium-bedded brown siltstone to fine sandstone with ripple crosslamination, brachiopods and corals (18 m), grading into massive, white crinoid grainstone with abundant corals, stromatoporoids, and brachiopods. 0-40 m.

ORDOVICIAN AND SILURIAN

UPPER ORDOVICIAN TO UPPER SILURIAN

OSCP-E CAPE PHILLIPS FORMATION: E member: thin-bedded, light to medium grey lime mudstone with skeletal wackestone to packstone interbeds containing abundant brachiopod, crinoid, and trilobite fragments. 115 m.
OSCP-D D member: thin- to medium-bedded, light to medium grey siltstone with graptolites, whole brachiopods and nautiloids, and fish fragments. 160 m.
OSCP-Ccy C member: thin-bedded medium to dark grey dolomitic siltstone and mudstone with abundant graptolites. Lithologically monotonous but spans 10 graptolite zones with a total thickness of 195 m. Two biostratigraphic assemblages are recognized: OSCP-Ccy: Cyrtograptid assemblage (sakmaricus to testis zones) which corresponds to the Wenlock (125 m). OSCP-Ct: Bohemograptid assemblage (dubius to tenuis zones), which corresponds to the Ludlow (70 m).
OSCP-B B member: medium- to thick-bedded black, cherty or dolomitic siltstone and mudstone with abundant 5- 50 cm diameter carbonate concretions. 60 m.
OSCP-A A member: thin-bedded, grey to black, argillaceous, bitumenous lime/dolomudstone. 115 m.
OSCP-R Ridge member: orange-brown weathering, resistant, massive skeletal dolo/lime wackestone with macrofossils of Arctic Ordovician Fauna. ~10 m.

ORDOVICIAN

UPPER ORDOVICIAN

Oci IRENE BAY FORMATION: green mudstone with variable proportions of skeletal wackestone nodules. 50-60 m.

MIDDLE AND UPPER ORDOVICIAN

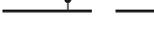
OCTu THUMB MOUNTAIN FORMATION: Upper Thumb Mountain: basal, thick-bedded lime/dolowackestone with white-weathering, grey silicified burrows and macrofossils (~5 - 10 m), overlain by medium-bedded, burrowed lime/dolowackestone (~50 m) and massive skeletal dolo/lime wackestone with macrofossils of Arctic Ordovician Fauna (~25 m). 80 m.

OCTI Lower Thumb Mountain: lower unit of massive dolostone with brown chert nodules and silicified macrofossils (~50 m) overlain by thick-bedded grey dolostone/limestone with sparse ostracodes (~180 m), and variably fossiliferous lime/dolowackestone containing Tetradium, gastropods, red algae, trilobites, and ostracodes (~20-30 m). 260 m.

MIDDLE ORDOVICIAN

OCBu BAY FIORD FORMATION: Upper Bay Fiord: recessive, interbedded green terrigenous mudstone and nodular, grey dolostone/limestone. Carbonates typically skeletal wackestone with trilobite and brachiopod fragments. Mudstone dominant near top. 30 m.

OCBI Lower Bay Fiord: lower gypsum/anhydrite overlain by grey-brown, burrowed, laminated, mottled or featureless dolostone/limestone interbedded with green-grey mudstone. 110 m.

- Lithological contact (approximate, assumed) 
- Limit of mapping 
- Normal fault (approximate, assumed); solid circles indicate downthrown side 
- Thrust fault (approximate, assumed); teeth indicate hanging wall 
- Fault (approximate) 
- Strike/Slip Fault Sinistral (approximate, assumed) 
- Strike/Slip Fault Dextral (approximate, assumed) 
- Anticline 
- Syncline 
- Bedding  65/
- Outcrop observation point 
- Mine 
- Zn-Pb showing 

PALEOZOIC