GEOLOGICAL SURVEY OF CANADA COMMISSION GÉOLOGIQUE DU CANADA

DEPARTMENT OF ENERGY, MINES AND RESOURCES
MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES

LEGEND

Coloured legend blocks indicate map units that appear on this map

CENOZOIC

QUATERNARY

Q — *Stream, deltaic, glacial and marine beach sediments (mapped only where underlying bedrock geology could not be inferred with reasonable certainty)*

TERTIARY
LOWER TERTIARY

Te — *EUREKA SOUND FORMATION: sandstone; siltstone; shale; minor conglomerate; dominantly continental*

PALEOZOIC

SILURIAN
UPPER SILURIAN

SOMERSET ISLAND FORMATION (Ss1 - Ss2)

Ss2 — *Upper member: dolostone and limestone, grey, greenish or buff, laminated; siltstone, red, green or variegated; rare limestone, bioclastic*

Ss1 — *Lower member: dolostone and limestone, grey, greenish or buff, laminated; minor limestone, argillaceous or bioclastic, rubbly weathering*

Ss — *SOMERSET ISLAND FORMATION: undivided*

SDo — *DOURO FORMATION: limestone, argillaceous; limestone, dolomitic, mottled; grey to greenish grey; rubbly weathering; minor limestone, bioclastic or intraclastic*

Scs — *CAPE STORM FORMATION: dolostone, grey, buff or brown; lesser limestone and sandstone; minor siltstone and shale; thin to medium bedded; recessive*

ORDOVICIAN AND SILURIAN
UPPER ORDOVICIAN TO UPPER SILURIAN

OSa — *ALLEN BAY FORMATION: dolostone, buff to pale grey, finely crystalline, medium to massive bedded, parts stromatolitic or bioclastic; resistant. Basal part probably includes dolomitized lateral equivalents of the Thumb Mountain Formation in areas where that formation was not recognized*

ORDOVICIAN
MIDDLE AND UPPER ORDOVICIAN

CORNWALLIS GROUP (Oca - Oct1)

Oct1 — *IRENE BAY FORMATION: limestone, argillaceous or dolomitic; shale; greenish grey; recessive*
THUMB MOUNTAIN FORMATION: limestone, dolomitic; dolostone, calcareous; pale grey, cream or greenish grey; fossiliferous; resistant

CAMBRIAN AND ORDOVICIAN
UPPER CAMBRIAN TO LOWER ORDOVICIAN

TURNER CLIFFS MOUNTAIN (€Otc1 - €Otc2)

€Otc2 — *Upper member: dolostone, pale grey or buff, fine grained, cherty; dominantly thick to massive bedded; resistant*

€Otc1 — *Lower member: dolostone, grey to buff, commonly laminated, thin- to medium-bedded; dolostone, greenish, fissile to thin bedded; sandstone, grey to white, locally red brown; common intraformational breccia and conglomerate; local stromatolitic units. Member lithology highly variable laterally*

€O$_u$ — *CAMBRO-ORDOVICIAN formations: undivided*

Pu — *PALEOZOIC formations: undivided*

ARCHEAN TO PROTEROZOIC

ARCHEAN - APHEBIAN

A — *Crystalline rocks: predominantly gneiss; minor metapegmatite, metabasite, granite and diabase; distinctive calc-silicate and marble bands*

Geological boundary (defined, approximate, assumed)
Geological boundary, marker bed, fold axis or fault (inferred under water or Quaternary sediment cover)
Boundary of Quaternary sediments
Trace of distinctive marker bed (approximate, assumed)
Bedding, tops known (horizontal; inclined, showing measured dip; vertical)
Bedding, observed from aircraft (gentle, 0 – 10°; moderate, 10 – 30°; steep, 30 – 60°)
Foliation (horizontal; inclined, showing measured dip; vertical; dip estimated from aircraft)
Fault; extension (solid circle indicates apparent downthrow side; defined, approximate, assumed)
Fault, sense of displacement unknown (defined, approximate, assumed)
Fault line scarp (defined)
Monoclinal flexure (arrow indicates downthrown side; defined, approximate, assumed)
Anticline (trace of axial surface; defined, approximate; arrow indicates plunge)
Syncline (trace of axial surface; defined, approximate; arrow indicates plunge)
Antiform (in crystalline Precambrian Shield rocks; trace of axial surface; defined; arrow indicates plunge)
Fossil locality, showing GSC locality number (C-24148)
Location of measured section (showing section number and location or line of traverse; index to sections given in accompanying GSC Paper 83 – 26) (93)

Geological map compilation by W.D. Stewart and J.Wm. Kerr, 1981-1982, based on geological mapping by J.Wm. Kerr, 1975 - 1976, and on published and unpublished sources

To accompany GSC Paper 83-26 by W.D. Stewart and J.Wm. Kerr

SCHEMATIC REGIONAL STRATIGRAPHIC RELATIONSHIPS ALONG EASTERN FLANK OF BOOTHIA UPLIFT BETWEEN 73°35'N AND 70°45'N LATITUDE

SCHEMATIC STRATIGRAPHIC RELATIONSHIPS

Unconformity (defined, projected, possible)

ACKNOWLEDGMENTS

Operation Boothia sections measured by A.D. Miall, 1976. Additional GSC sections measured by R.L. Christie, 1962 and R. Thorsteinsson, 1972, 1973

NOTES

1. The lower Paleozoic formations were not differentiated for mapping purposes south of this arbitrary boundary
2. The name "Lost River" has not been submitted to the C.P.C.G.N. for use on topographic maps

Geological cartography by M.D. Wallace, Institute of Sedimentary and Petroleum Geology, Geological Survey of Canada

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

Base map from 1:250,000 scale maps "Brentford Bay" 57G, published by the Mapping and Charting Establishment, Department of National Defence in 1967 and part of "Franklin Strait" 67G, H, published by the Army Survey Establishment, R.C.E. in 1966

Copies of the topographical edition of these maps may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa

Magnetic declination 1983 varies from 8°15.5' westerly at the centre of the west edge to 38°43.2' westerly at the centre of the east edge. Mean annual change 0.8' westerly

Elevations in feet above mean sea level

Recommended citation:
Stewart, W.D. and Kerr, J.Wm.
1984: Geology of Boothia Peninsula North, District of Franklin; Geological Survey of Canada, Map 1597A, scale 1:250,000.