Energy, Mines and Resources Canada
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GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA

MAP 1690A

SURFICIAL GEOLOGY

SOUTHERN PRINCE OF WALES ISLAND

DISTRICT OF FRANKLIN

NORTHWEST TERRITORIES

Scale 1:250 000 - Échelle 1/250 000

Kilometres 5 0 5 10 15 20 Kilometres

Universal Transverse Mercator Projection
Projection transverse universelle de Mercator

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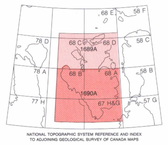
INDEX MAP



NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO ADJOINING GEOLOGICAL SURVEY OF CANADA MAPS

LEGEND

This legend is common to maps 1689A and 1690A, coloured legend blocks indicate map units that appear on this map

SURFICIAL DEPOSITS

QUATERNARY

POST-LAST GLACIATION

NONGLACIAL ENVIRONMENT

Ap,At,Af — *FLUVIAL SEDIMENTS:* alluvium; gravel and sand, 2-20 m thick, forming braided floodplains, **Ap**; low terraces, **At**; and fans, **Af**

MARINE SEDIMENTS: gravel, sand, silt, and clay, 1-20 m thick, deposited in deltaic and beach environments during regression of the postglacial sea

Mr — *Beach sediments:* gravel and sand, 1-5 m thick, forming ridges and swales

Mt — *Deltaic sediments:* coarsening upward sequences of clay, sand, silt, and gravel, 5-20 m thick, forming dissected terraces

LAST GLACIATION

PROGLACIAL AND GLACIAL ENVIRONMENT

GLACIAL MARINE SEDIMENTS: clay, silt, sand, and gravel, 1-30 m thick deposited in deepwater ice marginal and proglacial environments while the sea stood at or near marine limit

Mv — *Deepwater proglacial silt veneers:* silt, clay silt, and fine sand, 1-2 m thick

Mb — *Deepwater proglacial silt blankets and plains:* silt, clay silt, and fine sand with minor gravel, diamicton beds, and dropstones, 2-30 m thick, forming plains and blanketing low angle slopes, extensively disrupted by thermokarst in places

Mm — *Ice contact glaciomarine sediment:* clay, silt, sand, and minor gravel, 10-30 m thick, forming end moraine ridges, extensively kettled and dissected in places

Lv,Lb — *GLACIAL LACUSTRINE SEDIMENTS:* silt and sand deposited in glacier dammed lakes, forming veneers less than 1 m thick, **Lv**; blankets 1-2 m thick, **Lb**

GLACIOFLUVIAL SEDIMENTS: gravel and sand, 1-10 m thick, deposited behind, at, and in front of the ice margin

Gp,Gt,Gf — *Proglacial outwash:* gravel and sand, 1-5 m thick, forming braided floodplains, **Gp**; terraces, **Gt**; and fans, **Gf**

Gr,Gh — *Ice contact stratified drift:* gravel and sand, 5-10 m thick, deposited as esker ridges, **Gr**; and kames, **Gh**

GLACIAL ENVIRONMENT

TILL: nonsorted stony muds, 0.5-60 m thick; deposited or remoulded during three main regional ice flow phases, occurring as six distinct morphological facies. Main flow phases are north-northwestward, 1; northward curving to northwestward, 2; and eastward, 3

ICE FLOW — PHASE 3 AND LATER

Tm — *End moraines:* ridges, 5-60 m high, composed of or mantled by till, extensively kettled in places, formed during deglaciation after third phase of regional ice flow

T³b — *Till blanket and streamlined till plain:* 2-5 m thick, forming a blanket on broad interfluves and fields of drumlinoid ridges a few metres high in lower areas

T³r — *Ribbed moraine fields:* short, sinuous, subparallel ridges, 2-5 m high, composed of or mantled by till

ICE FLOW — PHASE 2

T²d — *Drumlin field:* drumlinoid ridges, 5-30 m high, composed of or mantled by till

T²r — *Ribbed moraine fields:* short, sinuous, subparallel ridges, 2-5 m high, composed of or mantled by till, associated with northwestward ice flow of phases 1 and 2

ICE FLOW — PHASE 1

T¹d — *Drumlin field:* drumlinoid ridges, 5-30 m high, composed of or mantled by till

T¹p — *Till plain with megaflutings,* kilometres wide, 5-10 km long, and only a few metres high

Tv — *Till veneer:* 0.5-2 m thick and discontinuous, surface mimics form of underlying rock surface, associated with various regional ice flow phases

PRE-LAST GLACIATION

NONGLACIAL (PERIGLACIAL) ENVIRONMENT

Cv — *COLLUVIUM and RESIDUUM:* stony mud and muddy rubble, 1-2 m thick, formed by weathering of carbonate bedrock and mass movement of weathered mantle on smooth solifluction graded slopes; protected by cold-based ice during last glaciation

ROCK

PRE-QUATERNARY

ROCK: rock of various lithologies and ages; hilly and hummocky, with basins, steep slopes, and cliffs, and ice-moulded forms produced by glacial scouring, and with channels cut by meltwater; includes patches of thin till and minor scree aprons along coastal cliffs

Rb — *Consolidated sedimentary rocks:* limestone, dolostone, mudstone, sandstone, and conglomerate of lower Paleozoic age, surface commonly frost shattered to platy felsenmeer

Ra — *Igneous and metamorphic rocks:* gneiss with minor marble and quartzite of Precambrian age; joint blocks slightly displaced by frost heave but essentially unweathered

Geological boundary (defined, gradational)
Cliff in bedrock
Ice moulded bedrock
Crag and tail
Drumlin, drumlinoid hill
Light glacial grooving of till surface
Margin of dispersal plume; teeth toward plume axis, steep side of teeth face down ice
Lateral shear moraine
End moraine ridge
Lateral moraine
Ribbed moraines
Ice contact face
Esker (direction of flow inferred, not inferred)
Kame (small conical gravel hill)
Subglacial and proglacial meltwater channel (large, small)
Lateral meltwater channel; barb on upslope side
Kettles
Iceberg scour
Retrogressive thaw flowslide
Till sample
Site of radiocarbon dated sample

Geology by T.F. Morris and A.S. Dyke, 1984, 1985, 1986

Geological cartography by M. Hudon, Geological Survey of Canada

Colour separations were produced using digital methods

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

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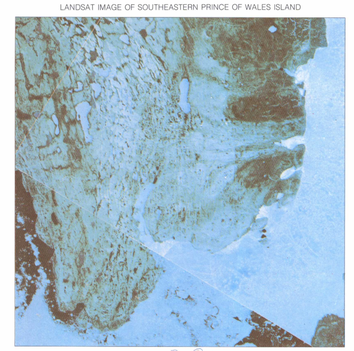
The proximity of the North Magnetic Pole causes the magnetic compass to be erratic in this area

Elevations in feet above mean sea level

LANDSAT IMAGE OF SOUTHEASTERN PRINCE OF WALES ISLAND



kilometres 10 0 10 20 30 kilometres

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1690A