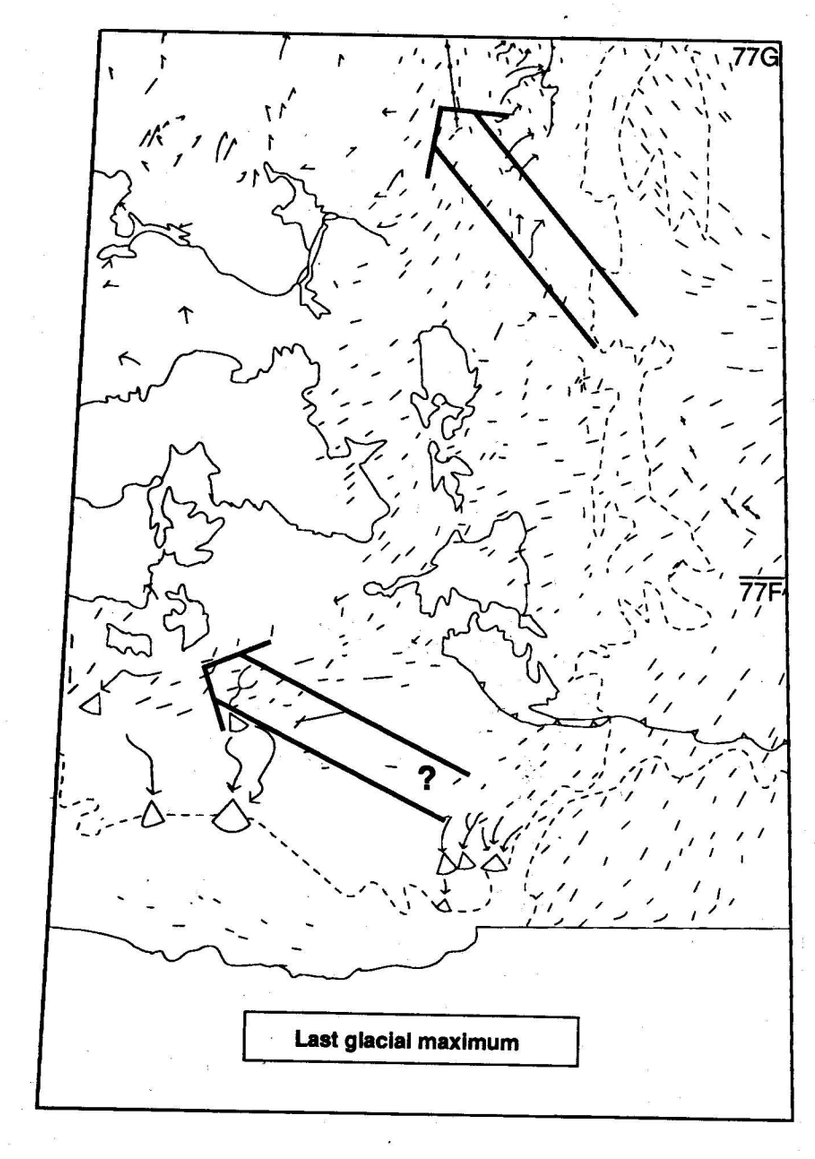
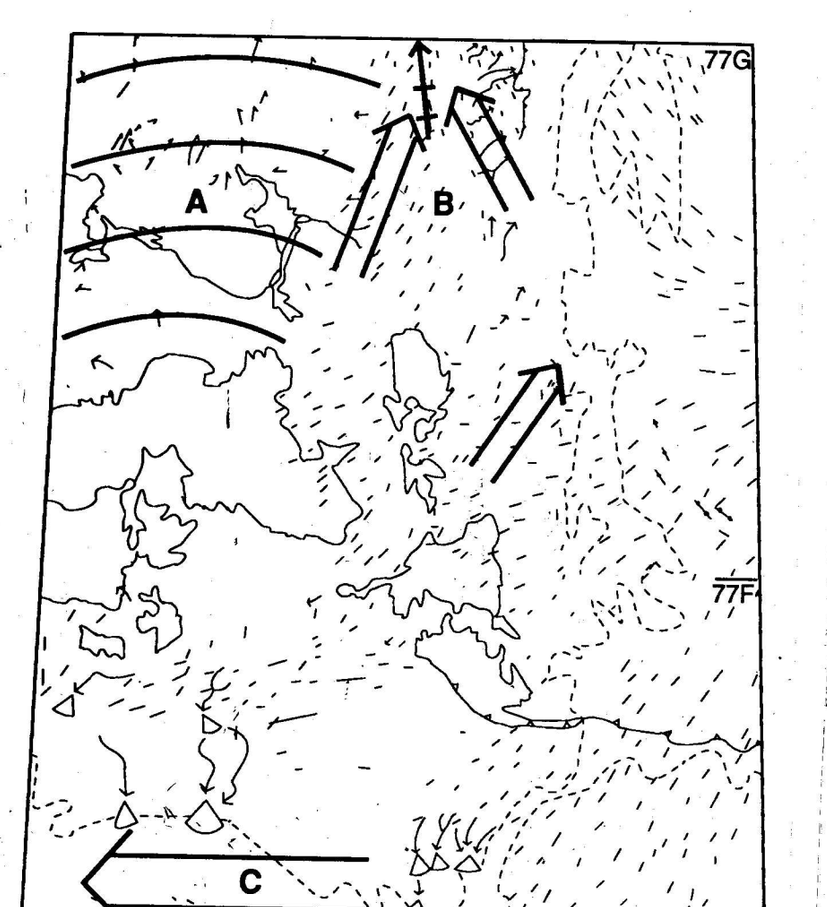
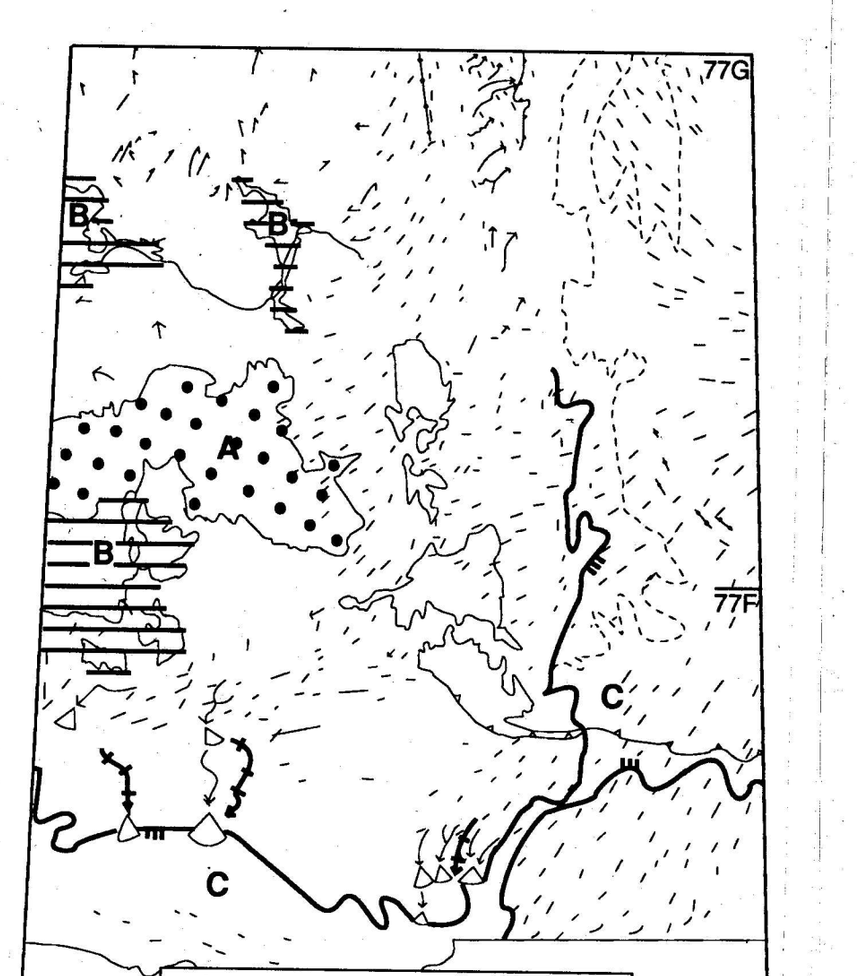
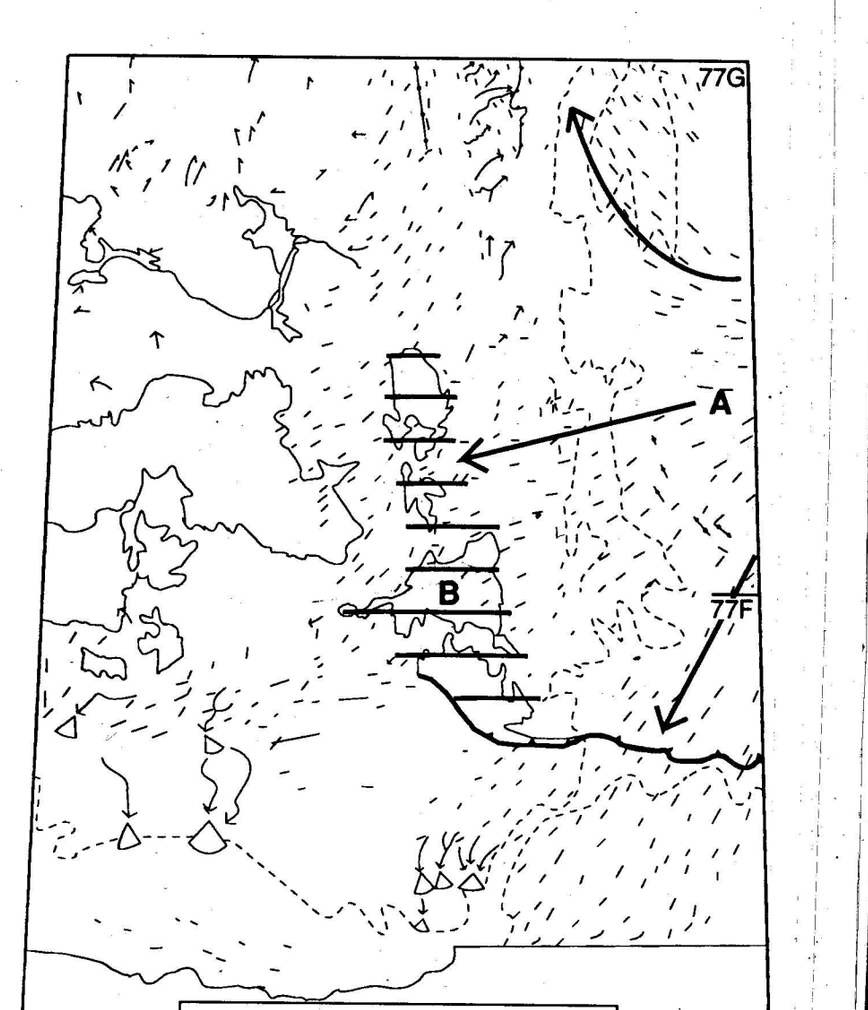
GEOLOGICAL SURVEY OF CANADA — COMMISSION GÉOLOGIQUE DU CANADA

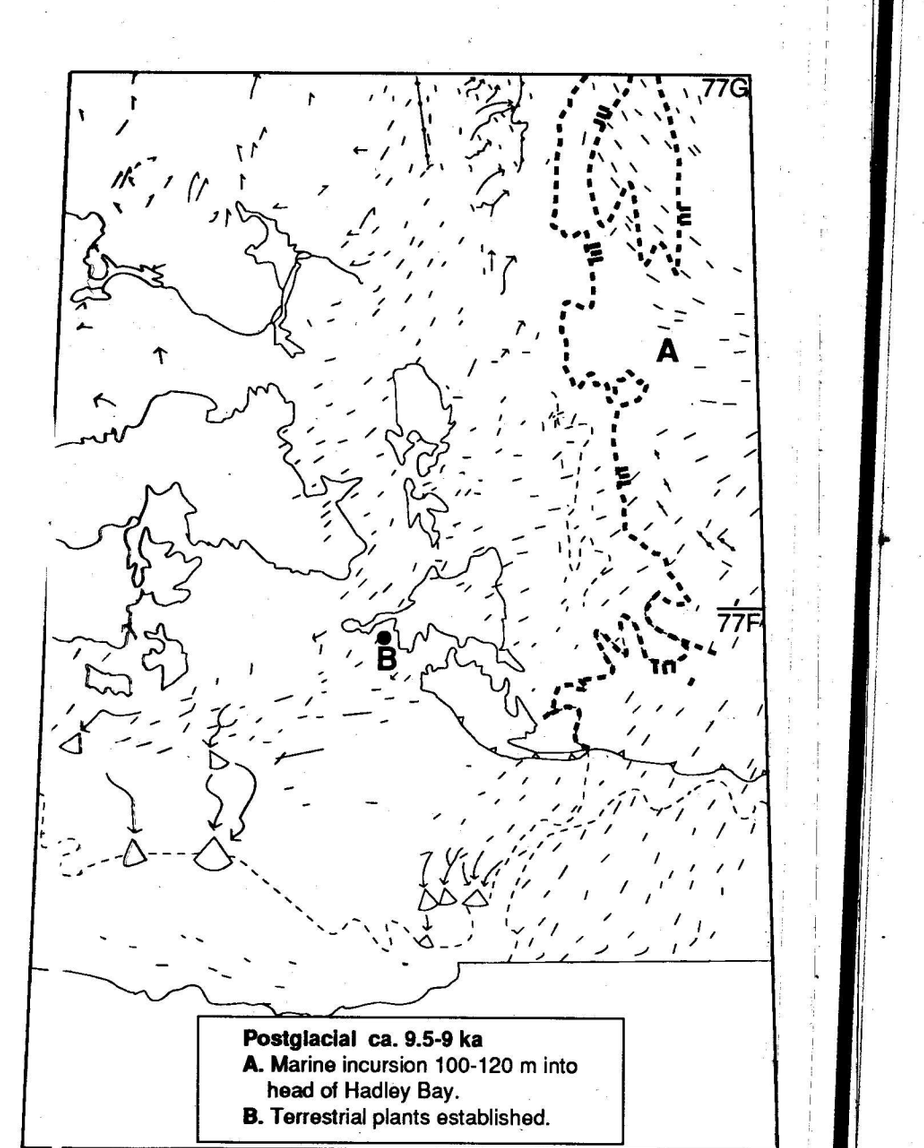
77 G


Last glacial maximum


Late glacial ca. 11-10.5 ka
A. Ice thins on Shaler Mts, becomes cold based; margin retreats to S..
B. Warm based flow to N and E.
C. Warm based flow to W.


Late glacial ca. 10.5-10 ka
A. Cold based ice (some glacier ice remains today).
B. Proglacial lakes.
C. Marine incursion 110-140 m.


Late glacial ca. 10 ka
A. Readvance from E into Hadley Bay and area to S.
B. Proglacial lakes.


Postglacial ca. 9.5-9 ka
A. Marine incursion 100-120 m into head of Hadley Bay.
B. Terrestrial plants established.

Speculative glacial events

LEGEND 77F & 77G

HOLOCENE NONGLACIAL ENVIRONMENTS

F — **FLUVIAL DEPOSITS:** bouldery gravel to silty sand; 1 to 10 m thick; channel, floodplain and terrace deposits

L — **LACUSTRINE DEPOSITS:** silt and sand, locally peat; 1 to 2m thick; lacustrine, fluvial, colluvial, glaciolacustrine or organic deposits, in minor valleys or basins; commonly numerous ponds.

HOLOCENE - LATE PLEISTOCENE NONGLACIAL AND PROGLACIAL ENVIRONMENTS

EMERGED MARINE DEPOSITS: bouldery gravel to silt; few cm to 10 m+ thick; shoreline, nearshore and offshore deposits, exposed after shoreline regression; maximum elevation rises from 110 m in the northeast to 140 m in the south.

Wb — **Raised beach deposits:** bouldery to silty sand over till, rubbly to silty gravel over rock; a few cm to several m thick. Discontinuous large ridge (to 5 m high) at marine limit along Prince Albert Sound.

W — **Nearshore and offshore deposits:** stony sandy silt; 10 m+ thick; locally clayey; proglacial deposits, including rhythmites, mostly the suspended load from major glacial meltwater outlets; thinning away from deltas in a gradational change to nonglacial deposits 2 m or less thick.

Wv — **Glaciomarine veneer deposits:** stony sandy silt; generally <1 m thick; proglacial marine or brackish sediments, discontinuously veneered over till or less commonly rock.

GLACIOLACUSTRINE DEPOSITS: silt or fine sand; 1 to 10 m+ thick; deposited in lakes mainly impounded by ice.

LG — **Glaciolacustrine deposits:** silt or fine sand; 2 to 10+ m thick.

Lv — **Glaciolacustrine veneer:** silt or fine sand; 0-1 m+ thick; deposited proglacially as a veneer, commonly discontinuous, over till or rock.

FG — **OUTWASH DEPOSITS:** bouldery to gravelly sand; 1-20 m thick; proglacial floodplains, fans and deltas, including deltas in proglacial lake spillways, minor kame terraces.

LATE PLEISTOCENE GLACIAL ENVIRONMENT

G — **ICE CONTACT GLACIOFLUVIAL DEPOSITS**: bouldery gravel to gravelly sand, locally silty sand rhythmites; 2-10 m+ thick; in ridges, knolls or hummocky complexes, including eskers, deposited in subglacial or englacial environment.

TILL: : calcareous loam; 10-50% of volume consists of boulder to granule size clasts of dolomite, minor sandstone, basalt, quartzite; only slightly calcareous over centre of Proterozoic Minto Inlier (Shaler Mountains); thickness 1-60 m+.:

TW — **Marine washed till**: till > 1 m thick; below the marine limit, washed by regressing shoreline processes to leave concentrations of boulders and/or sand, and subdued glacial landforms

T — **Undifferentiated till:** till 1-10 m+ thick; locally moulded into elongate drumlins

Tm — **Hummocky thick till:** till 10-60+ m thick; numerous gravel knolls and pressed till ridges; probably includes massive bodies of glacier ice; scattered flowslides.

Tv — **Till veneer:** till <2 m thick; too thin to mask underlying rock relief and structure; areas of exposed rock, pockets of thick till; steep colluviated slopes are included in this unit.

PRE-QUATERNARY AND QUATERNARY NONGLACIAL AND GLACIAL ENVIRONMENTS

R — **ROCK:** Mostly dolomite, minor limestone, chert and shale; subhorizontal; part of Paleozoic Arctic Platform. Clastic and carbonate sediments, basalt flows, gabbro dykes and sills of Proterozoic Minto Uplift underlyingShaler Mountains and west shore of Hadley Bay. Rock fractured to blocks or disaggregated to pitted rubble by glacial and subaerial processes, except, polished intact bedrock locally exposed where streamlined till cover has been recently removed. Rubble worked into discontinuous beaches locally below marine limit.

Geological boundary
Flowslide
Pingo
Marine limit
Prominent delta
Abandoned meltwater channel (sidehill, ice front, col, major spillway channel)
Ice margin, well defined
Esker
Kame, gravel knoll
Minor transverse moraine or crevasse filling
Drumlinoid ridge, flute (length to scale)
Drumlin (length to scale)
Ice-streamlined bedrock
Till analysis; numbered sites described in Nixon (1988) — 665
Radiocarbon dated material

Age	Material
Lab. no.	Elevation

Field observations by J.G. Fyles, 1959; D.A. Hodgson and J. Bednarski, 1982. Airphoto interpretation at 1:60 000 scale in 1982 by J. Bednarski and 1994 by D.A. Hodgson. Compilation and drafting by N. Giroux. Compiled initially on 1:50 000 scale topographic maps. Data from till sample sites published in Nixon (1988).

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Recommended citation:
Hodgson, D.A. and Bednarski, J.
1994: Preliminary suficial materials of Kagloryuak River (77F) and Burns Lake (77G), Victoria Island, Northwest Territories; 2 maps, scale 1:125 000; Geological Survey of Canada, Open File 2883.

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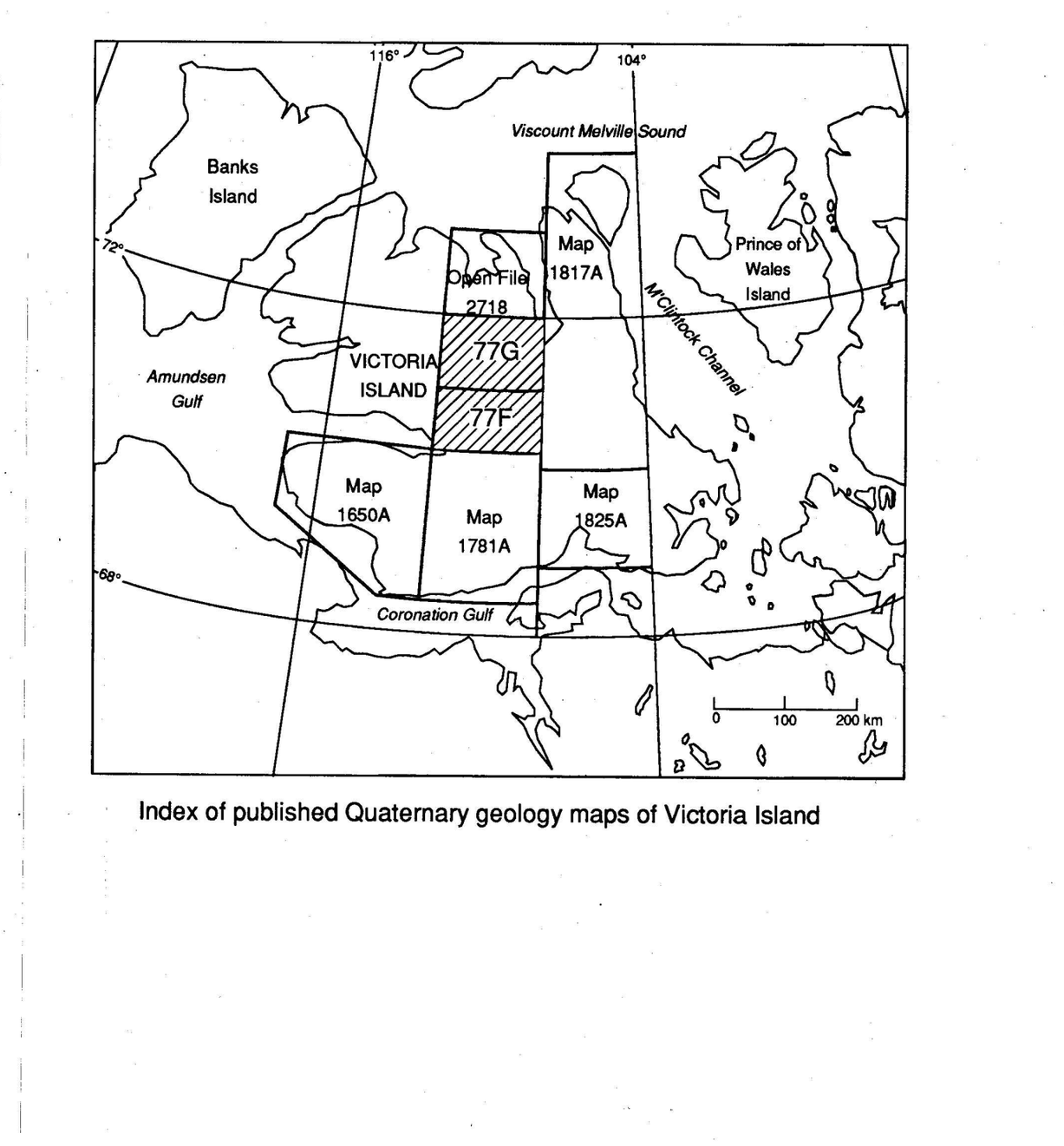

Index of published Quaternary geology maps of Victoria Island

SURFICIAL MATERIALS, BURNS LAKE, VICTORIA ISLAND, NORTHWEST TERRITORIES (77 G)

Scale 1:125 000

Miles
Kilometres

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DOSSIER PUBLIC
2883
GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA
OTTAWA
1994

Natural Resources Canada — Ressources naturelles Canada