

HUDSON BAY

MANSEL ISLAND

HUDSON BAY

LEGEND

QUATERNARY

A ALLUVIAL DEPOSITS: silt, sand, gravel, cobbles, and boulders deposited in channels or on floodplains of modern active drainage systems; "modern" is defined as the period since retreat of the sea, which can be up to 8000 years, depending on elevation above sea level

MARINE DEPOSITS: sediments deposited in or at the margin of the marine environment; glacial deposits modified by marine processes. All sediments represent other conditions as a result of continuous isostatic uplift

MO Deepwater (depths greater than wave base) sediments and postdepositional organic cover, undifferentiated; clay, silt, and sand washed from slopes into deep water by wave action during emergence or deposited offshore from river mouths; marine sediments commonly overlain by peaty organic materials; may include pockets of siltstone

MOR Surface composed of sediment of undetermined thickness and 20 to 80% bedrock outcrop, or less than 1 m of deposit mantles bedrock

MOR Nearshore sediments: Mi sand, gravel, and cobbles deposited as beaches, bars, and spits; formed by wave action on silt, bedrock, esters, and by reworking of alluvial and deltaic sediments; may include ice-pushed ridges; commonly unvegetated

MIR Mi: sandy nearshore sediments with cover of vegetation

MIR Surface composed of sediment of undetermined thickness and 20 to 80% bedrock outcrop

MOR MO: sand, gravel, and cobbles forming ridges parallel to former shorelines, with intervening flat areas of peaty organic deposits resulting from poor drainage; ridges comprise more than 25% of area

MOR MOR: surface composed of sediment of undetermined thickness and 20 to 80% bedrock outcrop

Mw Mw: sand deposited as a thin sheet on the coastal plain by migrating shorelines; likely derived from wave reworking of marine clayey sand or silty sand

Md Deltic sediments: isotactically uplifted deltaic sand and gravel

Md Md: deltaic sediments covered with distinct beach ridges which form a chevron pattern curving back from the river on both banks

GLACIAL DEPOSITS: sorted and unsorted sediments deposited by, on, or near glacial ice

G Glacial till: contact stratified sand and gravel deposited as esters in ice tunnels by meltwater streams; pebbles, boulders scarce; commonly enriched in Precambrian erratics in contrast to surrounding, nearly erratics-free terrane

Th Till: calcareous, clay- and silt-rich till with sparse clasts; contains erratics specific to Quebec mainland; includes undifferentiated pockets of fine grained marine sediment

Th Th: hummocky till, irregular hummocks, 100-300 m diameter and 5-10 m high; probably marks zones of ice stagnation

TR TR: surface composed of sediment of undetermined thickness and 20 to 80% bedrock outcrop

TR TR: ribbed (Rogers) moraine hummocks and straight to sinuous ridges generally less than 1.5 km long; ridge may be asymmetric in cross-section with steep side facing down-ice; ridges commonly oriented transverse to direction of ice flow

TR TR: surface composed of sediment of undetermined thickness and 20 to 80% bedrock outcrop

TM TM and TMR: till and marine sediments, undifferentiated; all veneered by fine grained marine sediments or depressions in till surface filled by marine sediments or diamicts consisting of mixtures of till and marine sediments resulting from cryoturbation processes

TMR TMR: surface composed of sediment of undetermined thickness and 20 to 80% bedrock outcrop

R Precambrian: Ordovician and Silurian carbonate rocks; surface comprises more than 80% outcrop or talus/moraine

REMARKS

Well drained surfaces characterized by mudbolts; poorly drained surfaces characterized by frost polygons and a cover of peat and sedge meadows. Parallel streaklines or other slight irregularities in the surface have disrupted normal drainage, resulting in shallow dammed lakes, extensive areas of tundra ponds, and a network of tiny meads cutting through the organic mat. Also includes recently drained lake basins

Pebbles and cobbles of Paleozoic lithologies are frost shattered on all beaches more than 3 to 4 m above present high tide. Difficult to distinguish from frost-shattered bedrock. Ridges may dam shallow lakes. Hummocky gravel deposits on beach-covered slopes probably caused by freezing of periodic outflow of groundwater through subterranean conduits in limestone, resulting in doming of the frozen overlying sediments and subsequent downslope movement of sediment during the thaw period

Commonly reworked by wave action, unvegetated

Heavily reworked by waves; surface characterized by mudbolts or sorted circles, and small frost polygons (cell size < 1 m)

Surface characterized by mudbolts or sorted circles; sediment commonly contains marine shells

Bedrock generally frost shattered and jointed; abundant evidence of solution along joints

Geological boundary: - - - - -

Small bedrock outcrop: - - - - -

Fluting or other glacial-erosion linear feature: - - - - -

Ribbed (Rogers) moraine ridges: - - - - -

De Queer moraines: - - - - -

Esker (direction of flow assumed): - - - - -

Beach ridges: - - - - -

Hummocky gravel deposit on beach-covered slopes: - - - - -

Small alluvial fan: - - - - -

Geology by J.M. Aylsworth and W.W. Shits, 1970, based mainly on airphoto interpretation with limited ground observations and sampling

Geological cartography by F.J. Hensy, 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 at the scale of 1:250 000 published by Surveys and Mapping Branch in 1970. Minor base modifications by the Geological Survey of Canada, 1988

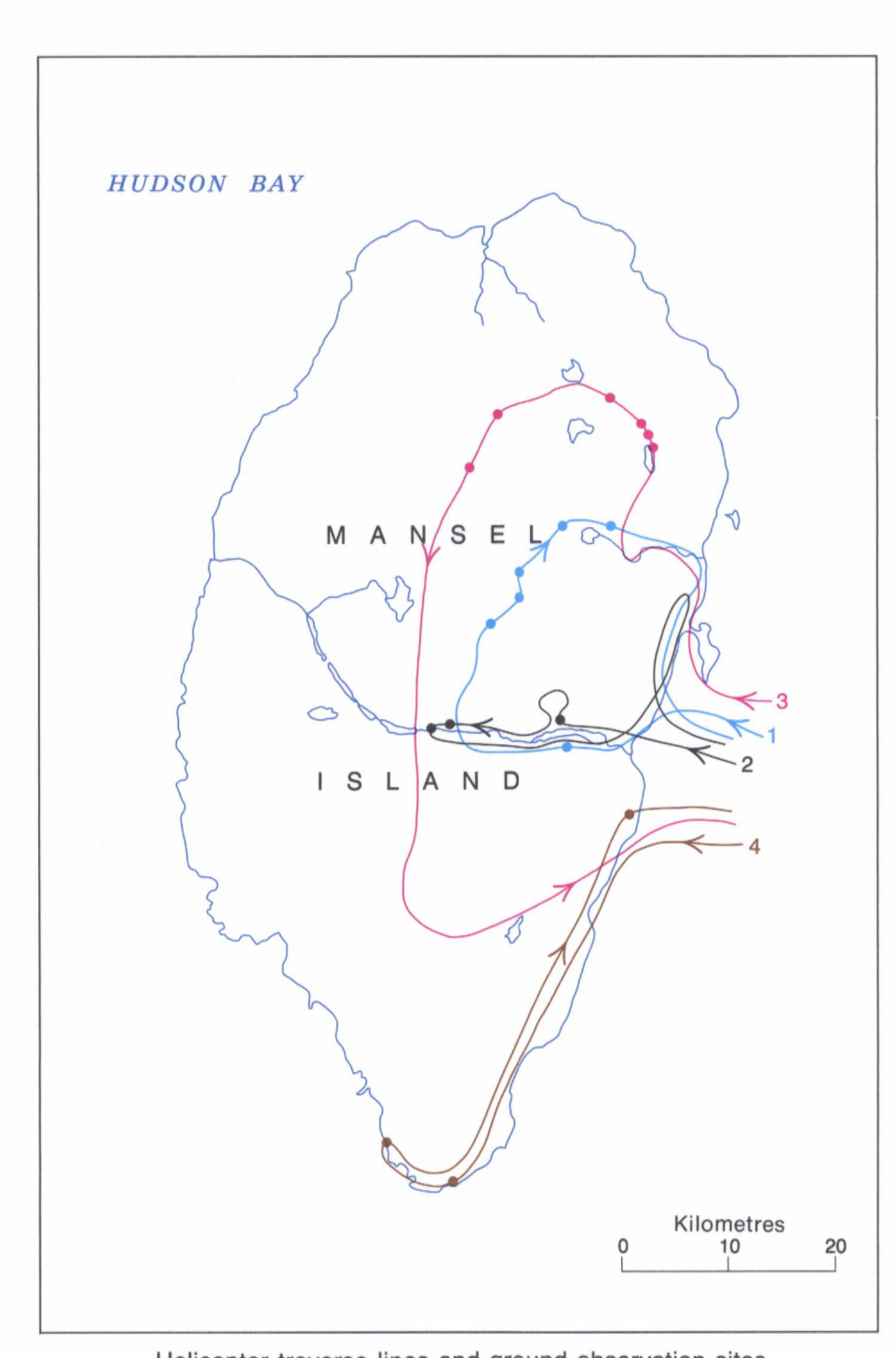
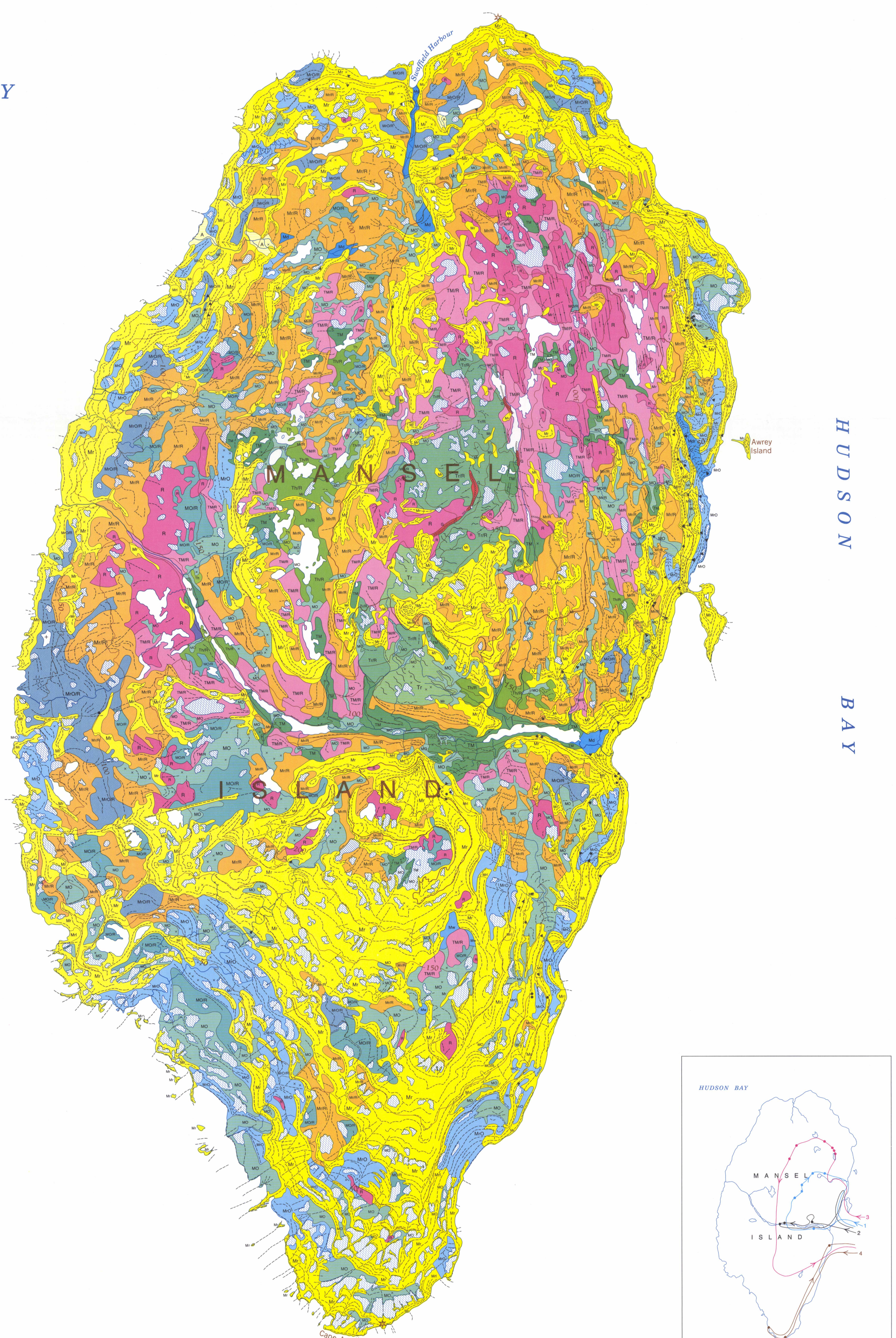
Copies of the topographical editions of this map may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, Ontario, K1A 0E9

Mean magnetic declination 1986, 3° 01' West, increasing 4.1° W annually. Readings may from 38° 35' W in the SW corner to 31° 22' W in the NE corner of the map area

Elevations in feet above mean sea level

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

INSET MAP



GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA

DEPARTMENT OF ENERGY MINES AND RESOURCES
MINISTÈRE DES ÉNERGIES MINES ET DES RESSOURCES

MAP 1632A
SURFICIAL GEOLOGY
MANSEL ISLAND
DISTRICT OF KEEWATIN
NORTHWEST TERRITORIES

Scale 1:125 000

Kilometres 0 2 4 6 8 10 Kilometres

Universal Transverse Mercator Projection
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Aylsworth, J.M. and Shits, W.W.
1986. Surficial geology, Mansel Island, District of Kewatin, Northwest Territories; Geological Survey of Canada, Map 1632A, scale 1:125 000