COMMISSION GÉOLOGIQUE DU CANADA   GEOLOGICAL SURVEY OF CANADA

SURFICIAL GEOLOGY
NORTHEASTERN MANITOBA

SURFICIAL DEPOSITS
QUATERNARY

POSTGLACIAL ENVIRONMENT

7 **ORGANIC DEPOSITS:** lichen-moss, sedge, and woody peat; 1.5 to 3 m thick; may occur at or up to 3 m above the water table; includes both bog peat and fen peat. It should be noted that a veneer of peat (<1m) mantles most deposits.

6 **ALLUVIAL DEPOSITS:** sand, silt, and rounded gravel, commonly terraced; thickness ranges from a thin veneer up to 30 m; deposited by streams within active drainage systems since the retreat of the sea, proglacial lakes, or glacial ice; includes floodplains, spits, point bars, and deltas.

POSTGLACIAL AND GLACIAL ENVIRONMENT

MARINE/GLACIOMARINE DEPOSITS: well sorted, stratified sand to stony silt deposited in the Tyrrell Sea, and glacial deposits modified by marine processes during offlap.

5b Nearshore sediments: well sorted sand, silt, and gravel; up to 3 m thick; occurs as a series of ridges in the form of beaches, bars, spits, and ice-pushed ridges, or as a flat plain.

5a Offshore sediments: poorly sorted clayey silt, stony silt, and sand with pockets of nearshore sand and gravel and windblown sand; thickness up to 2 m near marine limit and increasing towards Hudson Bay to a maximum of 7 m; may contain marine fossils and is commonly overlain by organic materials; probably a till plain levelled by filling of depressions and planation by wave action.

LACUSTRINE/GLACIOLACUSTRINE DEPOSITS: massive to bedded silt-clay with granules, overlain by a veneer of sand; deposited in glacial Lake Agassiz. Where deposits are thin, they mirror the underlying glacial and bedrock structures, and where thick, they form a flat plain.

4b Nearshore sediments: well sorted sand and gravel; occurs as a ridge or series of ridges with 1 to 4 m of relief; includes beaches, bars, spits, and ice-pushed ridges.

4a Offshore sediments: well sorted clay, silt, and sand; thickness ranges from a thin veneer up to 20 m; surface characterized by iceberg scours and extensive areas of peat.

GLACIAL ENVIRONMENT

GLACIOFLUVIAL DEPOSITS: water sorted, stratified sand and gravelly sand deposited in, around, or near a glacier, largely as a result of meltwater flow.

3 Outwash sediments: well rounded, cross-stratified sands and gravels, 3 to 20 m thick, characterized by braided channels and kettle depressions; occurs in the bottom of subglacial and proglacial meltwater channels; surfaces are commonly terraced and hummocky.

2 Ice contact stratified drift: well sorted, poorly stratified sand and gravel kame deposits, 10 to 30 m high, stratified sand and minor gravel esker deposits, 5 to 20 m high, and recessional, end, and interlobate moraines; kames occur as irregular mounds flanking eskers; eskers occur as elongate ridges, generally parallel to the direction of ice movement; surface of features in many areas reworked by lacustrine and/or marine processes and locally overlain by beach deposits.

GLACIAL DEPOSITS (TILL): poorly sorted debris deposited at the front of or beneath glaciers or under ice shelves; generally silty and highly calcareous, deposited by an ice mass flowing southwestward from a centre over Hudson Bay basin or Labrador-Ungava; may be locally overlain by lacustrine silt and clay.

1b Till blanket: silty to sandy, 1 to 10 m thick; masks most of the bedrock features; surface features include drumlins, flutings, ribbed moraine, and hummocks.

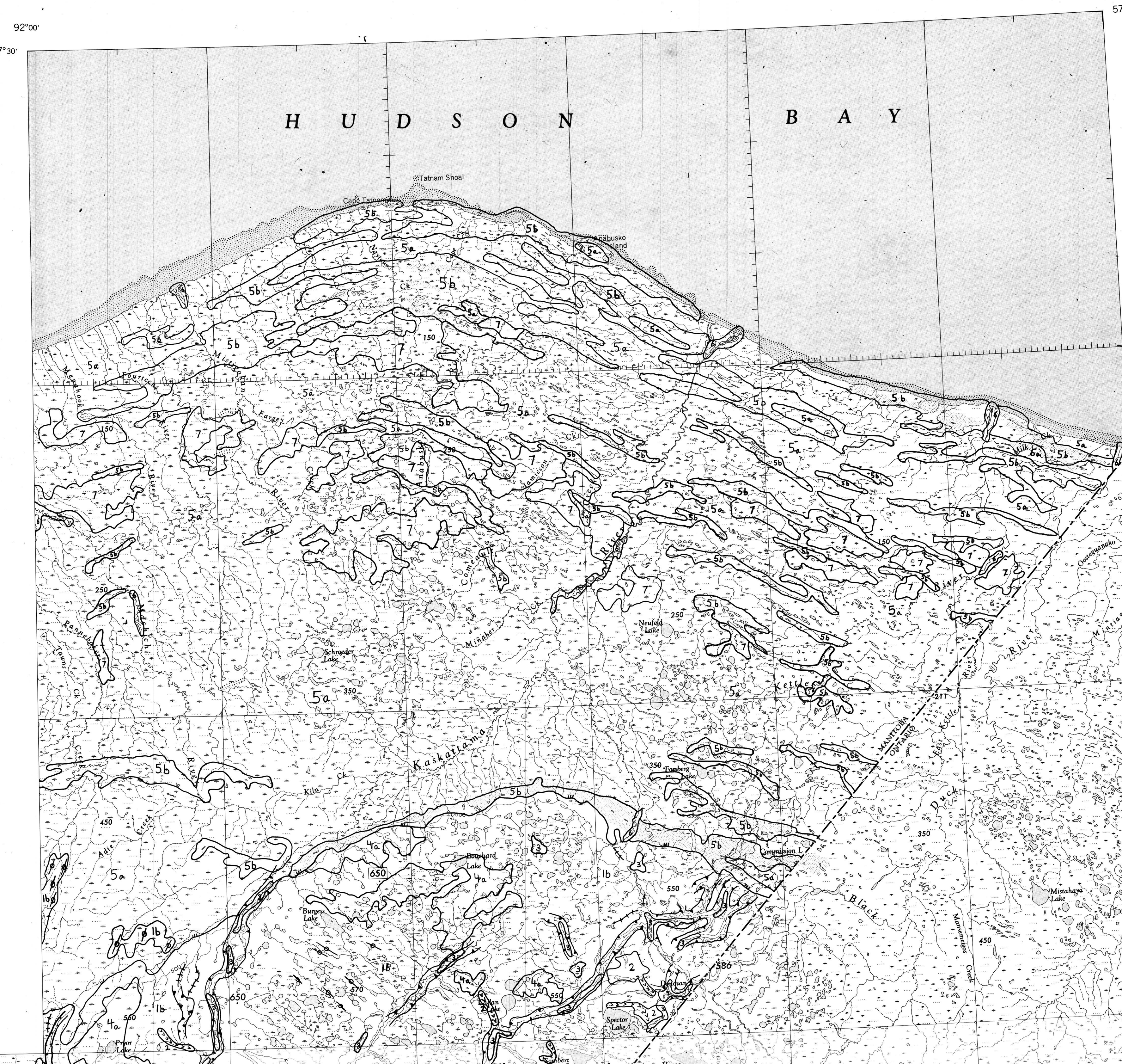
1a Till veneer: silty, usually less than 1 m thick, interspersed with areas of thicker till, bedrock, marine, or lacustrine sediments; surface reflects the underlying bedrock structure.

BEDROCK
PRE-QUATERNARY

R Precambrian rock: largely massive granitic and gneissic rock with isolated bands of volcanic rock.

- geological boundary
- small bedrock outcrop
- striae (ice flow direction known, unknown)
- crossed striae (1 = oldest)
- drumlin
- fluting
- crag and tail (direction of ice flow known)
- ribbed moraine
- esker (direction of flow known, unknown)
- meltwater channel (large, small)
- beach ridge
- trimline or terrace slope break
- Tyrrell Sea limit

Geology by M.D. Clarke, 1986-1989



OPEN FILE 2083
SURFICIAL GEOLOGY

NORTHEASTERN MANITOBA

Scale 1:500 000 - Échelle 1/500 000

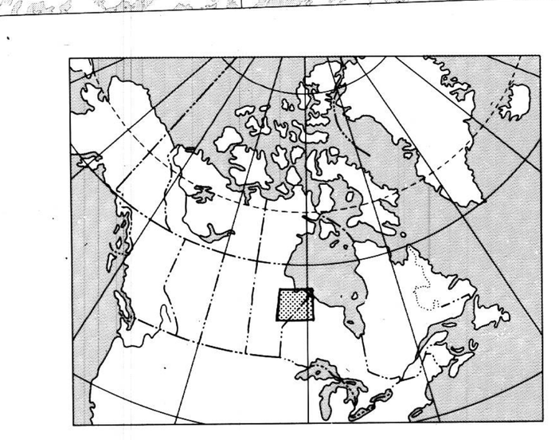
Kilometres 10 0 10 20 30 40 Kilomètres

Contribution to Canada-Manitoba Mineral Development Agreement 1984-89, a subsidiary agreement under the Economic and Regional Development Agreement. Project funded by the Geological Survey of Canada.

Energy, Mines and Resources Canada   Énergie, Mines et Ressources Canada

Canada

Manitoba Energy and Mines



INDEX MAP

OPEN FILE
DOSSIER PUBLIC
2083
GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA
OTTAWA
1989

SHEET 1 OF 2