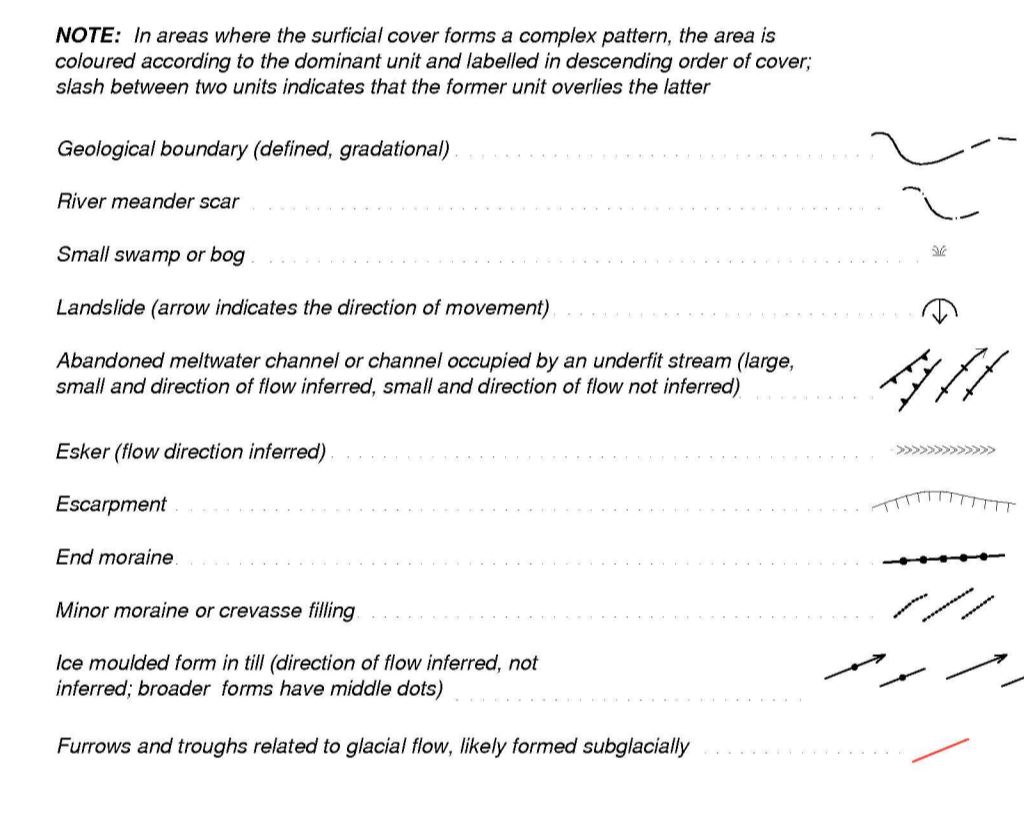


- LEGEND**
Coloured legend blocks indicate map units that appear on this map
- QUATERNARY**
SURFICIAL DEPOSITS
- POST LAST GLACIATION**
- NONGLACIAL ENVIRONMENTS**
- ORGANIC DEPOSITS:** peat, 1 to 2 m thick; formed by the accumulation of vegetation in poorly drained depressions (swamps and bogs); produces fill, wet terrain
- O¹** **Bog peat:** Sphagnum or forest peat formed in an ombrotrophic environment; may be treed or treeless with a cover of ericaceous shrubs; hummocky, wet terrain, in places underlain by ground ice, O¹h; kelted topography, O¹k; undifferentiated bog and fen deposits, O¹
 - O²** **Fen peat:** peat derived from sedges and partially decayed shrubs in a eutrophic environment; forms relatively open peatlands with a mineral rich water table that persists seasonally near the surface; often covered with low shrubs and sometimes a sparse tree cover
- COLLUVIAL DEPOSITS:** mass wasting debris <1-100 m thick; nonsorted to poorly sorted, massive to stratified debris deposited by direct, gravity-induced movement
- C** **Landslide and slump debris:** active and inactive landslides
- ALLUVIAL DEPOSITS:** sorted gravel, sand, and organic detritus deposited by flowing water
- A** **Fluvial deposits:** sorted gravel and sand >1 m thick; forming active flood plains, with meander channels and scroll marks, Ap, alluvial fan deposits, poorly sorted gravel and sand >1 m thick, At, undifferentiated, A
 - Ac** **Fluvial channels:** numerous subparallel alluvial channels covering gentle to moderate slopes
 - At** **Fluvial terraces:** low, inactive terraces immediately adjacent and higher than active floodplains
 - L¹** **LACUSTRINE DEPOSITS:** sand, silt and minor clay deposited in a former lake; generally overlain by organic deposits; exposed by recent fluctuations in lake levels; usually < 1 m thick
- POSTGLACIAL OR LATE WISCONSINAN**
- PROGLACIAL AND GLACIAL ENVIRONMENTS**
- L** **GLACIOLACUSTRINE DEPOSITS:** fine sand, silt, and clay, deposited in glacier-dammed lakes in valleys or along margins of the retreating Laurentide Ice Sheet; > 1 m thick; level topography; usually overlain by organic deposits in lowlands; hummocky topography, Lh
 - G** **GLACIOFLUVIAL DEPOSITS:** proglacial outwash, gravel and sand with minor diamictites deposited in front of the ice margin, usually 1-10 m thick; forming distal outwash terraces Gt, ice-contact ridges, Gr, undifferentiated, G
- TILL:** nonsorted debris deposited directly by glaciers; matrix is sandy to clayey and contains striated clasts of various lithologies, including many Canadian Shield erratics
- Tb** **Till blanket:** > 1 m thick; forming undulating topography; contains Canadian Shield erratics; extensively fluted and drummed till blanket, Td, hummocky moraine, Th, rolling topography, Tm
 - Tr** **Ridged moraine:** > 1 m thick; moraines or crevasse fillings forming a ridged topography
- NOTE:** In areas where the surficial cover forms a complex pattern, the area is coloured according to the dominant unit and labelled in descending order of cover; slash between two units indicates that the former unit overlies the latter

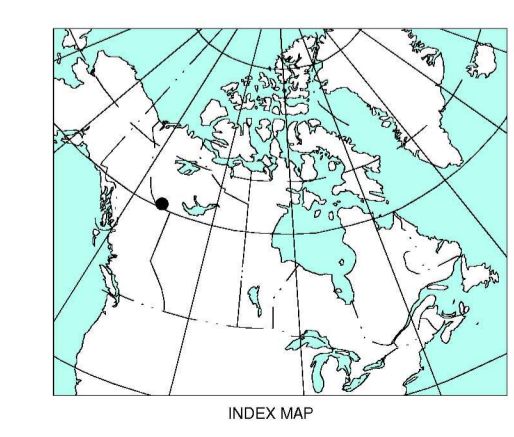


NOTES ON GLACIAL HISTORY:

During the Late Wisconsinan glaciation (ca. 25 000-10 000 years ago), the Pointe-de-flèche River map area was glaciated from the northeast by the continental Laurentide Ice Sheet. Several ice-moulded landforms indicate the southwest glacial flow. A broad northwest-trending ridge of thick till cuts across the northeast corner of the map area. The ridge, characterized by numerous lakes and ice-moulded landforms, is thought to have formed by subglacial thrusting when the ice sheet was forced to flow uphill out of the Liard River valley, or it may be recessional moraine that has been overridden by a readvance. Given the regional deglacial chronology (Dyke and Prest, 1987), the end moraine would have been deposited about 12 ka ± 10 BP. During deglaciation, the regional drainage through the Liard River system to the Mackenzie River was blocked by the ice sheet as it retreated northeastward. This caused glacial Lake Liard to flood the Liard River valley, as well as, several other short-lived glacial lakes in broad depressions. Glaciolacustrine deposits and tills in this area are poorly drained and are overlain by extensive organic deposits. Peat palaeosols, plateaus and thermokarst features indicate discontinuous permafrost throughout the organic terrain.

REFERENCE

Dyke, A.S. and Prest, V.K., 1987. Late Wisconsinan and Holocene Retreat of the Laurentide Ice Sheet. Geological Survey of Canada, Map 1702-A, scale 1: 5 000 000



CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level

Digital Topographic Data provided by Geomatics Canada, Natural Resources Canada and adjusted to conform to Landstar Geocover image by the author

OPEN FILE 1773
SURFICIAL GEOLOGY
POINTE-DE-FLÈCHE RIVER
NORTHWEST TERRITORIES

Scale 1:50 000 Échelle

Universal Transverse Mercator Projection
North American Datum 1983
© Her Majesty the Queen in Right of Canada, 2003

Projection transversale universelle de Mercator
Système de référence géodésique nord-américain, 1983
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Geology by J. Bednarski, 2000, 2001, 2002
Geological compilation and digital cartography by J. Bednarski, 2002

This is a product of the Central Foreland NATMAP Project
Any revisions or additional geological information from the user would be welcomed by the Geological Survey of Canada

95 B/15 Emile Lake GSC OF 1775	95 B/16 Arrowhead Lake GSC OF 1775	95 A/13 No Title
95 B/10 Arrowhead River GSC OF 1773	95 B/9 Pointe-de-flèche River GSC OF 1773	95 A/12 No Title
95 B/7 Tourbière River	95 B/8 Muskeg River GSC OF 1753	95 A/5 No Title

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2003

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